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THE MAGAZINE

Fantasy AND Science Fiction

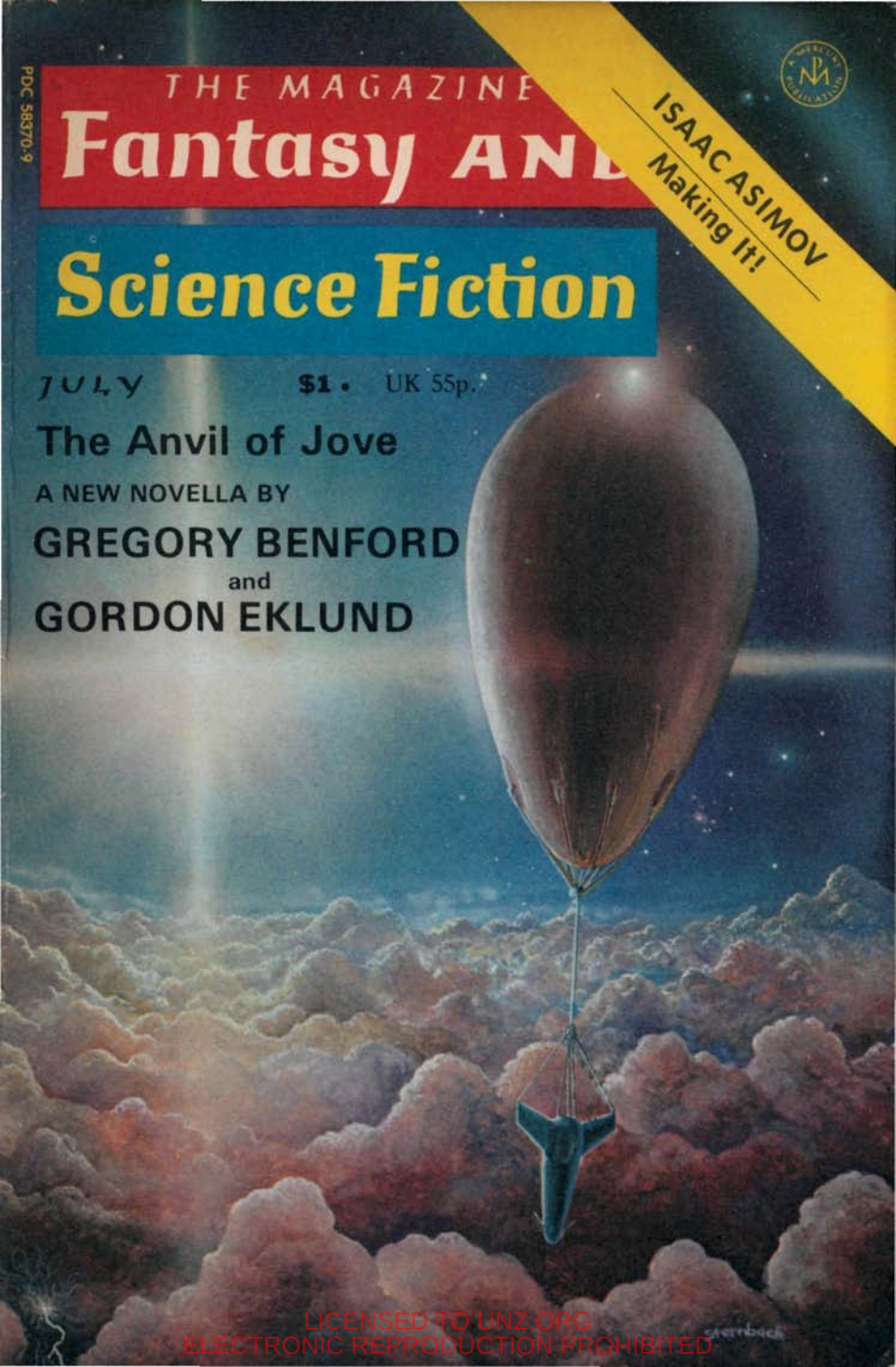
ISAAC ASIMOV
Making It!

JULY $1. UK 55p.

The Anvil of Jove

A NEW NOVELLA BY

GREGORY BENFORD
and
GORDON EKLUND



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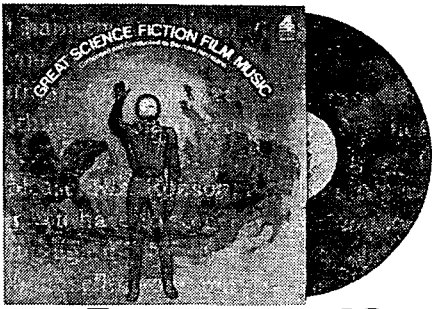

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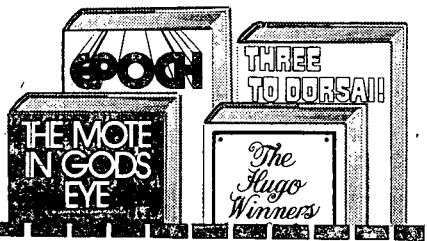

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J. P. Dixon (who was "Jeanne Parker," "Sweets to the Sweet," April 1976) returns with a sad and funny tale about Maude-Ellen Stringer, whose keeping of a certain kind of faith brings very unusual results.

Waiting For You, Maude-Ellen

by J. P. DIXON

Maude-Ellen Stringer did not realize this was to be her very last evening in the Stringers' new home at Hawaii's favulous Happy Hibiscus Condominium Apts. For one thing she was scarcely settled in. Everything was still so strange, so new, and so lonely that she spent more time than usual gazing up at her wishing star where it hung in the warm dark sky — hope on a pendant — just above the volcano.

She was standing on her seventh-floor lanai — back in P'burg she'd have called it a porch and been done with it — and had stooped to help a frightened spider climb out of a water bucket when she realized that someone was spying on her.

It wasn't the first time either. Ever since Odel took off, she'd been sure somebody out there in the darkness wanted her. Wanted her bad.

Oh, no, no hooded fiends disturbed her rest. No specter threats in musty stairwells, no panting on the princess phone at night, most certainly no pools of blood to draw a rooted scream from that dark abyss she knew to be her soul. There never was an Essence of Evil, like the smell of scorched eggs, to dog her footsteps up the security elevator, through the concrete hallways, past the TV eye, and into the safety of this... the gleaming new apartment that she and Odel had worked so hard to buy. No, none of these at all, but she knew for sure she was watched, and she wondered.

It could not be her beauty he was after. "Homely as a mud fence," her husband Odel used to say in his down-home way of talking to their dinner guests. Homely as a mud fence and getting old — no, *was* old. "Tried to trade her in on a pair of twenties," was Odel's favorite joke on Maude-

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Ellen, "but that was years ago. Now I'd have to make do with a bedful of teenie-boppers. Whoopee!" Odel loved her though. At least, he'd kept her on.

More edgy than frightened now, she stepped back into the lighted room and closed the glass doors that shut off the lanai. It was then she heard something funny. A low whistle. Yes, it was a whistle. A whistle for a spaniel, or was it someone begging her attention? She switched off all the lights and waited. There it was again.

"Wee..ooo." Now high, now low. "Wee..ooo." "Maude-El-len."

How did he know her name?

She grabbed the phone and dialed. Nine nine gave her the manager, a pleasant normal woman with a trick of sudden laughter that made Maude-Ellen feel foolish after telling her about the watcher.

"Where's Odel?" asked the manager. It was a natural question.

"He's out." Maude-Ellen hated to admit he'd been out for the past eight days. No sooner had the plane touched down in Hilo than Odel changed into a brand-new aloha shirt and a brand-new philosophy of life. He spent one week in the apartment picking at his ukulele. The last Maude-Ellen saw of him, he was breezing down Kalani Street in the company of those muu-muu girls with ginger blossoms fast in their young black hair. "Hold the fort, Maudy!" were the last words she had from him, and she'd held it.

Of course she did not explain any of this to the manager. "Call the police? Do you think I should?"

The watcher was on the lanai now, she could see his shadow bobbing behind a tub of nonblooming *funniculus*. Maybe he wouldn't come any closer.

"Imagination, perhaps?" asked the manager.

"That's it." Maude-Ellen knew perfectly well it wasn't imagination because of the simple fact that she hadn't any. Where Odel saw castles and giants, she saw only clouds. When the Crowd took up Meditation, she was the only drop-out. Then, too, Odel had to beat her over the head, time and again, with a sofa pillow while their guests waited for her to recall the rules — any of the rules — to charades.

"Then you won't be calling the police?" asked the manager.

Maude-Ellen hated to call them again. She'd called them earlier before Odel left, called them about a terrible injustice done to a cat. Someone threw it, threw it deliberately from a top-story walkway, and it smashed at Maude-Ellen's feet as she came home from the market.

It was a scraggly cat, a golden cat with a lopped off tail, and it stared at her from astonished eyes

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that were not quite dead yet although its back was plainly broken and its skull was crushed against the pavement where it hit.

Maude-Ellen lay awake every night remembering how it cried out in a small kitten way, how it kneaded her arm with its soft paws as she kelt to comfort it. When the cat died finally, Maude-Ellen shouted, "Murder! Murder!" and called the Big Island police.

The sergeant was kind but he didn't see things her way. "If it's not your cat, lady, why don't you try and forget it?" he said to her. Then he laughed a little and added, "We're not in the dead-cat business, not yet anyways." He seemed surprised by Maude-Ellen's tears.

And so did Odel when she turned to him. "For Chriss' sake, Maudy, don't let it get you down so. It was just some kids having a little fun with a cat, that's all. God damn! but you are a wet blanket."

The shade behind the *funniculus* moved slightly, and a small light like a nimbus sprang up behind the rubber plant. She started to call out, Who's there? when an awful thought occurred to her. What if it was Odel who threw the cat? What if Odel wanted to throw her out too?

It was not fair, but men did that sometimes, she knew. When their wives grew old and ugly, when they'd lost their doves and roses, sometimes the men threw them out. Was Odel like that? For the first time that night she was afraid. Terribly afraid.

Was that a cat she heard? That soft purr. A kitten crying mew... mew.... No, it couldn't be. Not from her lanai.

"Maude-Ell-len."

It was not Odel Stringer calling her because she saw the figure stand and blot her view of the wishing star just as Odel burst in the front door. He threw on all the lights and yelled, "What the Sam Hill you doing sitting here in the dark? God damn, if that isn't just like you, Maudy."

He had a girl with him. Not one of your standard gin-soaked floozies but one of the new type. She was tall and skinny and her hair frizzed out of the armpits when she reached to embrace Maude-Ellen. She was wrapped in green velvet that swung to her toes and was tied at the middle with lace. The velvet was slit so far up the sides that a patch of the same frizzly hair peeped out from one of the slits when the girl gave up hugging Maude-Ellen to whirl herself limply about the apartment crooning, "Oh I love it I love it I love it."

Odel grinned just a bit sheepisly. "She's going to live here, Maudy. Name's Shallow Water.

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Ain't she somethin' though!"

Maude-Ellen had to sit down, her head was so bewildered, and her throat ached with unasked questions. When she did speak her voice was a whisper. "Odel, what about me?"

"Hell, Maudy, do what you want. Of course me and Shallow Water are going to need a lot of privacy for a while. You understand?" He bent and squeezed her arm in a certain way he had.

"Odel?" The all-absorbing question: "Odel, you didn't get anyone to kill me did you?"

Well, Odel Stringer hooted at that. Laughed so hard his eyes filled with tears that flowed like rivers down his pink, pink cheeks. When he regained control he assured her he had no intention of hurting her in any way, shape, or form. "Because you won't make trouble for me and the girl here, I know you won't. You're not that kind of person."

He grew serious with her then, opened his heart to her, and she listened, all the while keeping her good ear cocked toward the lanai.

"You see, Maudy, I need my freedom. I've made my pile and now I've got a chance at a new life, the kind of life I've always dreamed of." He squeezed her arm again and winked. "You do understand, don't you? Maudy? Please say you do."

Maude-Ellen said nothing. What sense was that outside phantom making of all this, she wondered. Had he known all along this would happen?

Odel was angry. "All right, then, Maudy. If that's the way you're going to be. Shallow Water, you explain things to her just the way you explained them to me. Maudy's getting on and she's slowing down a little. Aren't you, honey?"

Shallow Water was busy digging in the fridge, but she did find the time to stand and instruct Maude-Ellen on the nature of the universe.

"Struggle and pain," recited Shallow Water, "is the truth we must live with."

"Yes, I know... but all those years... those long, long years."

"Nothing lasts forever."

"But I...." Maude-Ellen searched for an argument and found none. "I...I...."

"There is no *I*," ruled Shallow Water. "The Ego is but an illusion, a veil to be rent asunder if we wish to discover the Ultimate Truth which, by the way, is Nothing. Absolutely Nothing."

"But it's not fair... it's just not fair."

"In an indifferent universe such as we live in, Maude-Ellen, nobody gives a shit."

Maude-Ellen slumped as though

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struck by a crowbar. Was that true? Nobody? Nobody now? Nobody ever? Nobody? Nobody.

Life went on. The girl returned to frisking the fridge, where she spotted an unopened jar of macadamia nuts and squealed out for the joy of it all: "Odel Stringer, you're the end of the line for me!"

"Better bring 'em with you, honey," said Odel, briskly. And then he said to Maude-Ellen, not looking at her, "I'll give you an hour to get your things together. Call you a cab when I get back. Me and Shallow Water are going out." As a mean little gesture, Odel snapped out all the lights when he left. "Since you like sitting in the dark so much," he tacked on with sarcasm, and slammed the door.

After the fireworks: silence and cold.

Maude-Ellen sat for a long time without moving. At first her head was full of crazy. She could not stop the chanting of "nobody, nobody, nobody nowhere... the ultimate truth is nothing...." But that path led to total destruction, and there was just enough of the believer left in Maude-Ellen to recognize this and turn from it. She made her mind go quiet... shh... shh... soft, be still.

Her mind became a quiet pool. Sensations of sound made ripples upon the pool. Some of these made ripples of color. A rattle of palm fronds in the bamboo jungle below the lanai registered yellow. The ocean now seemed far away — a dull roar of purple, while a single o'ee bird drew circles of crimson so near that she could have put her finger through them if she'd wanted to. Just beside her earlobe, a million crickets made pinpoints of starlight, and the cat... the cat's soft mewing was a brush stroke of gold behind the glass doors that shut off the lanai.

"Woo-ee. Woo-eee. Maude-Ellen." The watcher's voice was black. The tapping of his fingers on the glass were....

"Oh, really! This has gone quite far enough!" Maude-Ellen opened her eyes and got to her feet, more than a little afraid, determined not to show it. "Just how much of this is a person expected to take?" she demanded as she opened the doors. Her voice softened then as she saw who it was. "It's you? Is it really you?"

It was. And the cat was with him. Not a ghostly cat either, not scrawny, complaining or puling, but firm and whole and glossy-coated, looking delighted to see Maude-Ellen again and rubbing up against her knees, purring.

The man smiled, twinkled his eyes in genuine good humor. "Do I look the way you imagined?"

"Oh, yes. Exactly. But how did you know? Where do you come

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from, how did you find me?" She had such a glorious and unexpected feeling of relief and anticipation. She'd waited so long. "Are you sure you're real?"

"You haven't forgotten have you, Maude-Ellen?" He pointed to her wishing star, which now swung high and clear of the volcano, bright as a sliver of ice or the last sharp remnant of faith. "I love you, you know," said her prince.

"Forever?"

"Of course. That was what you asked for, remember. Let's go before Odel comes back. My carriage is waiting." He waved his hand, and a shining two-seater made of disk-shaped metal dropped down to the lanai from where it had been hovering in the sky above the Happy Hibiscus. "There's someone for everyone, you know. And I'm the one for you."

He helped her in, and they waited while the cat jumped from the tub of nonblooming *funniculus* to Maude-Ellen's lap. They both had so many things to talk about and get caught up on that they never even noticed Odel and Shallow Water, whose mouths gaped wide in sheer disbelief, far, far below them.

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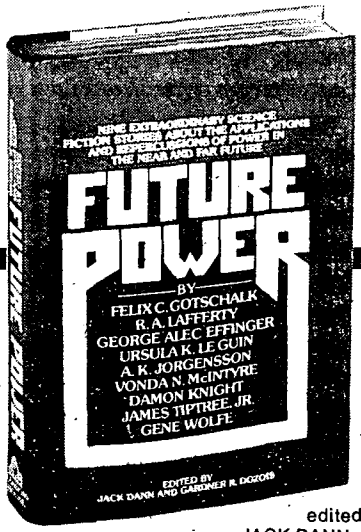

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In which Jim Sallis offers an offbeat and clever extension of "Miranda-Escobedo" (the court decision that requires arresting officers to read the suspect's rights to him).

Miranda-Escobedo

by JAMES SALLIS

I'd been on beat patrol in the East Village for four days when I came across the motorbike accident.

"I want to go where the action is," I'd told the loot. And I hadn't done bad: four Positives and ten Probables — I'd had to fight for those Probables. There was even talk of a citation, though it was really too early for something like that.

I was walking down the street kind of slow, looking around me, thinking of all the years I'd wasted in Identification comparing loops, whirls, ridges, auras. But this, I was thinking (I'd picked up some of the street talk around me), was where it was at!

The accident had taken place outside a bookstore; copies of *The Exorcist* were highlighted in the window. A youngish man on a motorbike had come flashing down the street and ploughed into the back of a '55 Chevy driven by an elderly schoolteacher. ("I tried to get out of his way," she was telling the cops, sobbing hysterically.)

The young man was obviously gone. Both legs were bent back under him at odd angles, his chest was crushed, and one eye had been torn out.

He was standing there looking down at his body.

I took one look at the aura and said, "Come on, buddy, let's go."

At first he didn't hear me. They always take it hard; we have trauma centers for those who take it *really* hard. So the manual says: At separation, give them a few minutes.

It didn't take that long. I guess he sensed me standing beside him. Anyway, he looked around, and I knew I didn't have to repeat what I'd said; he *knew* what I was doing there. They usually do.

"Now wait a minute, man,"

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Number Fifteen said. "You ain't got nothing on me."

"No? Well let me tell you something, punk. I've got Probable Cause — your aura's obviously damaged — and that's enough. We'll let Identification take it from there, okay? But you're coming with me."

I had a momentary vision of my prior colleagues down in I.S. receiving the request, marked, of course, Rush/Urgent. *All* the requests were marked Rush/Urgent.

I got the bell jar out of my pocket and held it out towards him, but I kept the top on. Still, the little foil leaves trembled. And *that's* when most of them break down, pack it in.

I could see from the way he looked down briefly, then back up, that this guy was going to be a hassle.

"Hey, now, man," Number Fifteen said. "Look, you check, you'll see I've got an in. I made a payment, three of them, just last week...."

So he was a pimp and a dealer. My Probable Cause was looking better every minute.

"...You can't touch me, man."

"Like *hell* I can't," I said. And that shook him.

"But I —"

He looked around nervously. But *I* was a little shook too, a little worried; this collar was taking too long, and the others weren't usually too far behind us.

Suddenly, he looked up and grinned.

"Man, you didn't read me my rights," he said.

So *I* looked up, and there he was.

He was standing at the edge of the crowd, wearing the usual white linen suit, which (plainclothes) meant he had a lot more experience than I, and I knew I'd blown it. Still, *some*thing might be salvaged. Plea bargaining doesn't take place just in courtrooms.

"You stay right where you are,"

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I said to the suspect, and went over to the detective.

"Egan," I said. "Fourteenth Precinct."

"McBain, 87th."

"Well, what do you think?" I said after a while.

"Well...." He looked at the bookstore window. "You read that?"

"What?"

"That book. You read it?"

"No. Meant to, but — well, you know how it is, with the job and all."

"Good book," he said. "*Damned* good book."

He took out a handkerchief and blew his nose. Well, that figured; it was winter, and they didn't keep it as warm as we did.

"Well, what do you think?" I said again.

"Well...." He looked the suspect over, up and down. "The aura's obviously damaged."

"Right," I said.

"But there's the matter of the agreement with you people."

"You know as well as I do," I said, "that that's not exactly a binding legal contract."

"Of course...." He looked back at the suspect. I wondered if he had his Identification people running a check. Probably not, at this point. "There's also the matter of your failure to give him his rights."

I shrugged. He was right, of course. The collar'd probably get tossed out for not following proper procedure.

"Look," he said. "I mean, I'd give him to you. We don't have much space, not near as much as you...."

I wanted to holler I'll take him, I'll take him. But I restrained myself, maintaining the "poker face" the manual advises for such times.

"...but I haven't filled my quota for the week," he said.

My spirits, as they say, sank.

"And I'm up for promotion next month," he said.

Which pretty much cinched it.

"Okay, okay," I said. "He's yours."

He nodded, took out the bell jar, and went over to the suspect. He held it out, took the top off. There was a quiet *pop*, and the foil leaves danced.

He walked past me on his way back up the street.

"God save me from street-wise punks," I muttered.

"What the hell," he said, walking on.

I finished the shift and, the next day, put in for a transfer to Central Holding, a joint service. Just a lot of paperwork and PR, but like the man said:

What the hell.

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This delightfully funny invention (especially to anyone who has ever done time on the Long Island railroad) is Mr. Bear's first story for F&SF. He writes: "I have lived in Europe, where I counted money for a bank in Germany, taught rowing in England and searched for the Loch Ness monster. More recently in the US, I have been a travel agent, tour guide and house painter. At present, I'm building a house in the country and working on two new books."

The Massahattan Snap Tube

by D. THOMAS BEAR

Before all this happened, Wally Busward was just past fifty, minimally overweight, slightly balding, reasonably perceptive, cautiously compassionate, somewhat skeptical, and often bone-weary. He was, in short, an average Wally: a fortunate collection of slightlies, partlies, and somewhats; a solid member of his community.

In the twenty-odd years following the Korean War, Wally Busward built his small food store in Massapequa, New York, into Busward's Nine Aisle SuperDeli, a substantial and generally thriving institution. He grounded his success firmly on three principles: stock what the customer wants; be open when he wants it; and be nice about it. His simple philosophy put three kids through college, one of them Ivy.

He ran a good store. To Wally, that meant keeping his customers satisfied. A spotless but comfortable appearance, high-quality goods at the lowest fair prices, attractive displays, and a sincere but friendly bit of gossip for everyone were all parts of Wally's good-neighbor policy. He tried hard. He really did.

So, when the time came, Ernie Robson, the area representative and repairman for Frigicoolers, didn't have a hard time talking Wally into ordering a brand-new model. As Ernie pointed out, times had changed. The new closed-door "display units" would add a modern touch to the frozen-food section, aside from having more storage capacity, taking up less floor space, and using half the electricity of his old model.

"You know it would cost you twice this much to keep your old wreck running."

"Not to mention that it'll cost me twice as much to buy a new one if I wait two years."

"Right."

When the new cooler arrived early one Tuesday morning three

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weeks later, Wally and Joe Pistronk, his assistant, rearranged the frozen-food section to accommodate the new six-foot-high, five-foot-wide cooling unit with the double, silent-hinged glass thermo-doors.

After almost an hour of jockeying the cooler back and forth, Wally decided it looked best against the outside wall of the store between the ice cream freezer and the potato chip rack.

Wally was so proud of his acquisition that for weeks he walked out of his way through the frozen-food section when going to the rear of the store. The canned-goods aisle was a much more direct route.

That's why he hesitated calling Ernie when he found the new cooler acting strangely on the Monday morning after Labor Day, a real scorcher during which Con Ed found it necessary to reduce the voltage by thirty percent. The problem wasn't in the cooling mechanism. The cream pies stayed frozen, the pizzas rock-hard, and the cool topping cool. A high-pitched forced whine, like a pig trying to catch its breath in summer, followed by a deep, sustained rumble, which concluded in a shattering jangle, recoiled through the store every minute.

"It's like a concrete bowling ball slamming into a rack of milk bottles," Wally explained to Ernie on the phone.

Twenty minutes later, when Ernie arrived, Wally was desperate. "Do something! It's cleared my store."

"Cripes, why didn't you shut her off?"

"And have that food spoil?"

"Warranty covers spoilage caused by equipment breakdown," Ernie recited. "Where's the panel key?"

By the time they located the panel key in Wally's office, the bedlam spewed by the cooler had increased twenty decibels.

Neither Wally nor Ernie, of course, realized the din was so loud, but Allie Schwartz, the delivery boy back from an early run, came dashing in to report: "Wow! What's happening? The store wall outside is shimmering like cherry Jello."

Wally panicked. "Get that damn machine off before my store collapses. Will that warranty cover collapsed stores?"

As cool as the coolers he sold, Ernie Robson fitted the key into the master panel and switched off the machine. Gradually, almost grudgingly, the bowling alley clatter abated. A close inspection of the wall inside and out revealed no damage.

Later, the three of them transferred the food from the quickly

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warming cooler to the cold-storage room in the rear of the store. "You going to have to take it in to the shop, Ernie?" asked Wally, unloading the last chicken pot pie.

"I'd rather try to fix it here, if that's OK. When do you close tonight?"

"Early, but tonight's monthly inventory and restocking. Joe and I'll be here till midnight. We could make it a threesome."

"That's square with me."

Shortly after Wally unlocked the door to let Ernie in that evening, Stu Minetti, who waxed and polished the store's floors, arrived for his monthly job. So, when Ernie called for help rolling the cooler away from the wall, three strong men — Wally, robust despite his age; Joe, former all-state high-school defensive tackle; and Stu, with arms as big around as his circular polishing brushes — responded. The four of them put their backs to the unit and pushed. After five minutes of red-faced grunting, without achieving even a micrometer of movement, Stu offered: "You remember to release the emergency brake?"

"Don't have an emergency brake," puffed Ernie. "Just roller catches, and they're off. And even if they weren't, the four of us should be able to carry it around the store dead-weight. Doesn't weigh that much. What did you do, Wally? Epoxy it to the floor or bolt it to the wall?"

"Funny man! Matter of fact, last time Stu was in here, I moved it myself. No strain at all."

"Well," said Joe, "it's not moving now. Not a hair."

"And I'll be damned if I know why not," grunted Ernie, giving the cooler one last tentative but unsuccessful shove with his hip. "And if we can't move it, I'm going to have one hell of a time fixing the damn thing. I could go in through the front, but it'll take a while."

"Whatever. It's under warranty. You do what you have to, to get it fixed tonight. If you need more help, I'll be over in the pet-food aisle."

Just over an hour later, after Wally and Joe had worked through the pet foods, cereal, and paper products, and were just beginning the canned vegetables, Ernie gave another shout.

Wally arrived to find his frozen-food aisle an orderly spread of metal plates, tubes, belts, gears, canisters, and stacks of small hardware. Ernie was totally inside the gutted cooler. Wally peered inside at Ernie for a minute, waiting. Then he said, "Well, why haven't you got it apart?"

"But I have. Out there," he said, pointing to the spread of metal on the floor, "you see every

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last piece of stuffing your cooler has. At least every piece they put in at the factory. I know. Been fixing them fifteen years." He leaned back against the inside wall of the cooler with his arms folded across his chest, his point proven.

"Well, I've been in the grocery business over twenty years, Ernie. I got a pretty good idea how the insides of a cooler look. And this cooler still has its insides inside. Are you going to try and tell me that's not a cooling unit?" He pointed to the mass of machinery behind Ernie.

"That's a cooling unit all right. No argument with you there. But it's not your cooling unit. You're standing in the middle of your cooling unit. I just spent the last hour taking it apart, and I couldn't find a damn thing wrong with it. There's nothing wrong with this other unit either. Except that it's here. My guess is someone slipped another cooler between your's and the wall."

"I'm a patient man, Ernie. An hour ago we couldn't jam a screwdriver between the wall and the cooler, and now you're trying to say someone has slid another cooler behind my cooler. Step out here and look for yourself." Wally demonstrated that the metal side wall of the cooling unit was flush against the brick wall of the store.

"I don't have to look. I know. You asked me what the problem was. Not how it happened. All I'm trying to tell you is that there's another operating unit behind your's where nothing but hard red bricks should be."

"No games please, Mr. Robson. Just do whatever you have to to get my cooler working again." Muttering something about selling out and joining his sister in Florida, Wally wandered back to Joe, who had been stacking cans of mandarin orange sections. Together, they almost finished the canned tomatoes before Ernie called a third time.

Poor Wally, his shoulders bowed like a man stepping up on the scaffold, trudged around the corner to the frozen foods. Ernie stood in the middle of an assortment of parts roughly twice the size of the earlier one.

Ernie, his face white except where oil streaked it black, looked genuinely shaken. "I've never seen anything like it. Not in fifteen years. Not in my whole life. Look at that!"

The first thing Wally noticed was how much deeper his cooler seemed. Then, it dawned on him that where a brick wall should have been, racks of beer and soda bottles had taken up residence.

"Christ, Ernie! What have you done with my wall? Where'd these bottles come from?"

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"They're in the cooler, Wally."

"I had no bottles in that cooler. Strictly frozen foods. The bottles are in aisle seven. Don't tell me that cooler has bottles in it because I don't want to see them."

"That's what I'm trying to tell you. Those bottles aren't in your cooler. They're in the other cooler."

"Again, with the other cooler. I thought you were going to take it out of there."

"I did. At least the back of it. That was a cinch. It's a Frigicooler. Same model as yours. Matter of fact, the serial numbers are consecutive, 843-69216 and 843-69217. These coolers are as close to twins as cooling units can get."

Wally seemed at a loss for words. Ernie continued tentatively. "Look on the other side of the bottles. What do you see?"

"Double-hinged glass thermodoors?"

"On the other side of the thermodoors?"

"A brick wall?"

"Look again. Here, let me move this Coke bottle."

"Oh, my gracious God! Where's my wall? That's not a reflection. Where'd that other store come from, Ernie?"

It took them only a minute to clear the bottles out of the other cooler and stack them on the floor of Busward's Nine Aisle SuperDeli. Then Ernie stepped through the double, silent-hinged glass thermodoors and out the other side. Wally followed close behind him.

For a few minutes they roamed the dark aisles of the store beyond the cooler. "Look at that, will you," Wally said, quite disgusted. "Highway robbery. That's twice what I charge for shredded coconut. What kind of place is this?"

"No idea," replied Ernie absent-mindedly. He was leaning heavily on the check-out counter, peering out the front window into the street. Suddenly his eyes widened to a full twice their normal size. He jumped as if he had been jerked by a tremendous force applied directly and equally to both his shoulders. The hair on the back of his neck stood up. Then he ran and grabbed Wally, still concerned with comparison shopping, and pulled him to the front of the store. "Cripes, Wally. Forget the coconut. Look at that! There, where Meyer's Drug Store should be. Recognize the building?"

"Jezus! What the hell is Madison Square Garden doing in Massapequa?"

It was a few minutes before Ernie broke the heavy silence. "Might as well ask what Massapequa is doing in Manhattan. That's definitely Eighth Avenue out front."

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"I don't like this one bit. Not one bit. Let's get out of here." Wally began backing towards the cooler in the rear of the store, his eyes never leaving the plate-glass window in the front. He almost tripped over a case of Cheerios.

"Don't wait on me. I'm right behind you." Even cool Ernie walked as if he expected each step to be his last mortal movement.

They scrambled back through the glass thermodoors to the parts-strewn floor of Busward's Nine Aisle SuperDeli.

Wally held his head heavily in his hands, a study of dejected frustration. "Ruined," he said. "Ruined by a lousy freezer. Twenty years shot to hell by an icebox."

"What do you mean," Ernie asked, visibly regaining his composure.

"You don't think insurance'll cover this. How about your warranty? Does it cover this kind of damage?"

"What? Damage? What are you talking about?"

"What's this? My freezer is broken. Oily parts all over the floor. Cases of soggy broccoli. And a hole in my wall that runs clear to Eighth Avenue. You ask what damage."

"There's nothing wrong with that wall. Not structurally. Let's check the outside wall. This didn't just happen, and the outside wall looked fine when I came in here a couple hours ago."

Wally followed him outside where a close inspection of the wall revealed no six-by-five hole. And, right where it should have been, next to the Old German Shoe Repair Shoppe, sat Meyer's Drug Store.

"Ernie, are we crazy? I saw the Garden right across the street. And now it's not there. You can't play the old shell game with Madison Square Garden. Penn Station is in the basement."

"Obviously, somehow something has compressed the fifty-odd miles between here and Manhattan into a few inches between those two coolers."

"That's the most ridiculous thing I've ever heard. Science fiction. Next you'll have little green men in the watermelons."

"You got a better explanation? We go through the coolers and we're in Manhattan. Through a hole in the wall that's not there from the outside."

"No," Wally admitted, shaking his head and tightening his lips. "But how?"

"No idea. But somehow I'm sure Con Ed is behind it."

Later, Ernie helped Wally restack the bottles in the mystery cooler. Then they refitted the back on it.

"Won't they notice their cooler

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isn't working?" Wally asked.

"Probably already have. Even if they called the repairman yesterday, they won't see him before Friday. I used to work in the city. Permanent three-day backlog."

"Couldn't they get some more men?"

"Sure. They could."

Scrappy little Artie Mulligan, born in the Irish village of Athlone during one of the more politically active periods of that country's history, could take it. Raised on revolution, weaned on widespread dissension, he developed a steely, easily defensible side in the cradle. This was the side he kept like a shield to fend off the shifting spears of adversity. His other side, more often on display, was finely tuned to those co-ordinates known as Irish soul. This two-sidedness gave Artie the illusion of being the offspring of the improbable marriage of John L. Sullivan and Molly Bloom. So, in that, at least, he was as typical an Irishman as you could find in New York.

Seven years after Artie emigrated to America, he managed to buy Graybar's Penn Deli. He immediately changed the store's name to Mulligan's Midtown Market. That was the name that hung over the door, but everyone knew it as Artie's.

In the ten years he owned the store Artie Mulligan had sufficient opportunity to exercise the adamantine side of his nature. In those ten years he had been robbed twelve times. The first four attempts cost him eight hundred dollars. After that, he got a gun, and the next eight failed. He had also endured the blights of truck strikes, rail strikes, bus strikes, subway strikes, garbage strikes, police strikes, firemen strikes and grape-worker strikes; not to mention snow storms, floods, blackouts, brownouts, broken windows, painted obscenities, air pollution, noise pullution, political pollution, harried commuters, senseless vandalism, overexuberant sports fans and hapless hobos. And despite the barrage of what he called his personal plagues — change makers, gum buyers, direction askers, donation solicitors and donut salesmen — he managed to squeeze profit from the five aisles of wares he called Mulligan's Midtown Market, though everyone else knew it as Artie's.

Through it all, he remained a jovial, quipping Irishman, priding himself on his hard skin and soft heart.

Nonetheless, even old scrappy Artie Mulligan found dealing with certain people trying. High on the list of infamy dwelled Mrs. Grassner, one of the few he generally disliked. Each morning,

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when she arrived to buy her usual bottle of cold beer, as she had done every morning that he had owned the store, she made sure to remind him, "I been buyun dis bier here longer dan you been sellen it." This particular morning, she continued her liturgy. "An dis da firz time dat you tried sellen me a bottle dat ain colt. My bierz got to be colt. Odderwize it doan fizz." She sprayed her syllables as if to demonstrate the action of the beer.

"Yes, and don't I know it all, Miz Grassner. But me new icebox went bust yesterday forenoon. Now I called the repairman to have a peek, and I bought a block of ice to chill what I could till he comes. That's the lord's level best I can do."

"But dis bierz warm. Yule gib me a gut ache."

"Well, my dear, nobody's forcing you to buy beer this morning, are they?"

"Doanchu get fresh wid me. I got a hab de bier."

"Well, then try the botties towards the bottom where the ice is. Maybe you'll find one of them chilled to your liking."

As he watched the old hag shuffle to the back of the store toward his warm, silent, double-hinged, glass-thermo-doored Frigicooler, he felt a twinge of pure frustration, an emotion most rare for a man who prided himself on his all-encompassing stride.

"Hey, Artur. Doan wan to uxcite you, but daerz somebody in your biercooler."

"Now the old lady's finally gone round the bend," he thought. "Surely you've been smoking out demons, Miz Grassner," he called out on his way back to the cooler. "Don't tell me you've been investing in the grape so early in the day. Pure shame it is too. It's not yet gone half ten."

"Na. Not a drop today. I swear dat dere's sombody taken da bottles outer da oderside. Heah. See fur yerself."

He reached the crone and opened the double doors to demonstrate his more acute sense of reality. "Now, you see. There's noth....Well, I be damned six ways! Of all the iron nerve of you. Come out before I fetch me pistol. Miz Grassner, you fetch the law, and I'll hold off these poltroons."

"What? The police? Gawd no. Not me." The suddenly spry old woman spun on a heel and tore out of the store, her stockings, bagged at the ankle, fluttering in the breeze created by her haste.

Alone, Artie Mulligan turned to face the invaders. "Now you can just back right out of there. If it's the bank you think you're tunneling into, you've clean missed it by a block. Kindly replace my beer and soda, brick up my wall,

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and be gone with yourselves. You've a minute before bullets begin."

But, by then, enough of the bottles had been cleared to allow Ernie Robson to poke his head through. "Hold on. Forget the police and the shooting. We're not breaking in."

"Not breaking in are you? What then are you doing in my soft drink cooler? Rowing a bleeding barge?" Artie's face was glowing red, but the poet in him had grown curious enough to shove aside some remaining root beer bottles. Ernie stepped through the cooler from Massapequa, followed by an equally excited Wally Busward. "I'm Ernie Robson, Frigicooler dealer for central Long Island. This is Wally Busward."

"Morning," said Wally in a tone intended to be cheerful, but which came out sounding more like a chirp.

"That's wonderful. A bit out of your territory, aren't you? Don't be thinking I'm sad to see you. Fastest repair call I've ever seen."

"We're not here to repair your cooler."

"No, feared you mightn't be. Then you'd better explain why you've shunned the front door. Did you have to carve a slice from my wall? You still have some quick storying 'cause I'm thinking it's the police I'll be calling."

"That's the point. I'm not sure we can explain," Ernie offered. "We were kind of hoping you could give us some help there."

"I? Explain? What the breeding hell do I have to explain? You come traipsing into my store, through my bloody cooler, and have the great greek gall to ask me for an explanation. You're both stone daft."

"No, please, listen. We're as much in the dark as you," Wally began tentatively, looking to Ernie for help.

"Right. We didn't cut this hole in your wall. We were going to ask you..." and he proceeded to quietly explain all he and Wally knew about the coolers. When he finished, Artie sat on a stack of cans and whistled.

"Massapequa? Off it now. You two are having a good go at Arthur sure. Must be Candid blessed Camera. That's it, isn't it? Where've you hidden the camera?"

"No, we're serious," reasoned Ernie. "Come see for yourself." Having nothing to lose that morning but time, Artie locked the front door of his store and followed Wally and Ernie through the coolers into Busward's. They showed the Irishman around the store and then took him out to the street where the Old German Shoe Repair Shoppe was just opening.

"Well, if this doesn't beat all,"

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said Artie. "Massapequa! Who'd have bloody thought it? Massapequa? What the hell and damnation am I supposed to do with the back of my store in Massapequa?"

Wally seemed to follow his reasoning perfectly. "I've been thinking the same thing all night. What are my customers going to do when they find out my frozen-food section is on Eighth Avenue? Hell, everything would melt before they could get it home. Nobody goes to Manhattan for frozen spinach."

Ernie, who had been sitting thoughtfully inside the shell of the back to back coolers, with Artie on his left in Manhattan and Wally on his right in Massapequa, finally spoke up. "I know I don't really have a stake in this. It doesn't seem like such a major problem."

"It's a flipping disaster. What the hell am I supposed to do with my Coke bottles?"

"And my TV dinners?"

"It amazes me," Ernie exploded, "how the two of you can be so concerned about Coke and TV dinners when you seem to be partners in a real miracle. Not to mention an absolute gold mine. Your minds can't be that narrow."

"What is it then," asked Artie.

"Look at it this way. Here I am, sitting between you two. Wally, you're in Massapequa. Artie, you're in Manhattan. Maybe sixty miles apart. And yet I can touch both of you without stretching. Give you a clue?"

The shopkeepers shook their heads in unison.

"I thought about this all night. Going through these coolers certainly makes getting from Massapequa to Manhattan a real snap." He clicked his fingers to demonstrate. "Takes even less time than, say, getting your ticket punched on the Long Island Railroad. I'm sure a fair number of people who spend four hours commuting to and from New York every day might be very interested in learning about these coolers of yours. Say ninety or a hundred thousand of them."

Wally looked at Artie before he looked at Ernie. And then he looked at the six-by-five tunnel. A slow smile spread across his face, followed by a look of comprehension, which broadened into a positive glow.

"Breeding hell," crowed Artie, just beginning to grasp the full implications of Ernie's conjecture. "You've definitely got a fair idea there. Sure as the saint's whiskers. And think what a tiff people blew when old Moses split the Red Sea for a couple of minutes." He clapped his hands together in glee. "That ain't even a blessed candle to our blaze. An instant commuter service. Marvelous. Truly bloody marvelous. Park Row, here comes Arthur Mulligan."

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That was how the Massahattan Snap Tube Corporation was founded.

Of course, a few preliminaries remained before this bombshell burst on the world of Long Island commuting. Artie, Wally, and Ernie, henceforth known as the Massahattan Snap Tube Corporation, quietly arranged to buy the small brownstone which housed Mulligan's Midtown Market. Wally had cleared his store of mortgages years before.

They engaged carpenters and cryptically gave instructions to partition off the frozen food aisle of Busward's. Another entrance was knocked into the parking-lot wall. The partition and entrance were finished off with nice brickwork. The entire corridor was painted a cheery shade of Good Morning Sunshine yellow. Soft fluorescent lighting was installed. A walkway was built through the coolers, and the whole passage was floored with heavy-duty green outdoor carpeting.

When the contracts for Artie's building were signed, permission was obtained to remove the entire first-floor front wall. After the carpenters had finished installing the two banks of five-gate surplus Port Authority turnstiles with the change booth in between them, they removed the brick and glass work from the front, leaving the store open on Eighth Avenue.

The total expenditure, including the purchase of the building, came to just under fifty thousand dollars. Three weeks after the tunnel had been formed, the Massahattan Snap Tube was ready for the public.

It took a bit of time to settle on a fair fare. Artie held out for a dollar per trip, pointing out that the normal monthly commutation pass was pushing a hundred and the one day round trip was eight. One dollar each way wouldn't be too much, he reasoned.

Wally reminded him that the cost of running the service was minimal, a couple of change booth attendants and electricity for the lights. "I can't see any reason to charge more than a quarter a trip."

In the end, Ernie sided with Wally, and the fare was set at twenty-five cents each way. That also made change making simple. The turnstiles were set to accept quarters, and in the end, even Artie agreed. "Sure, commuters have been taken for a ride for years. You both are straight on. We'll give them a break."

They took out ads in all of the local papers. Artie, for some reason, found himself in charge of writing the ad. Eventually, he came up with something that looked like this.

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COMMUTERS REJOICE!

THROW OFF THE TRACKS WHICH SAP YOU. LET US SNAP YOU.

MASSAPEQUA TO MANHATTAN IN THIRTY *SECONDS*

25¢ PER TRIP — CONTINUOUS SERVICE FROM BUSWARD'S

Obviously this stellar piece of advertising met with total incredulity. Harried commuters, taking no refuge in miracles, figured the ad to be a practical joke in particularly poor taste.

Eleven people showed up at the ribbon-cutting ceremony. Six of them were Mulligans. Four were Buswards. They cut the ribbon, emptied a couple bottles of champagne, and officially opened the Massahattan Snap Tube.

Fourteen people used the Snap Tube the first day. All were regular customers at Busward's Nine Aisle SuperDeli who strolled through the bright corridor thinking it was a new entrance to the store. You can imagine their surprise at suddenly finding themselves in Manhattan. All fourteen were back in Massapequa before they had really realized what had happened. A most inauspicious beginning for the Snap Tube, but the word spread.

Thirty-seven disbelieving commuters passed through the turnstiles the second day, all having heard of the amazing corridor at Busward's through local grapevines. All were astounded to find themselves strolling up Eighth Avenue less than thirty seconds after entering the corridor in the parking lot. One of them happened to be an assistant reporter for a local television station with the courage to do a three-minute story on the "Snaps," as he called it. The story ran after the weather on the eleven o'clock news. By midnight, the station had received three thousand calls.

Five thousand seven hundred and thirty-two people made the trip through the corridor the third day of operation. Joe Pistronk, who ran the change booth that day, ran out of quarters six times in one hour. Commuters quickly learned to bring their own change.

By the week's end, thirty-two thousand three hundred and seventy-nine quarters were being collected each day.

The gross receipts for the first month's operation came to just over three hundred thousand dollars. Operating expenses were $1,869.45. The bulk of that was salary for the two change booth attendants. Con Edison's share was only eleven dollars. The profit margin for the "Snaps" was enormous.

At the end of six weeks, the center of Massapequa had been turned into a shopping mall. All private cars were forbidden within

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six blocks of Busward's Nine Aisle SuperDeli. Eleven bus companies were operating thriving express service to the "Snaps" from various points on Long Island. The expression "snap to it" had taken on a new meaning.

Surprisingly, few commuters expressed the least interest in how the "Snaps" actually operated. Not that anyone would have been able to give a real answer. Most commuters accepted their good fortune as stoically as they had formerly resigned themselves to deteriorating rail service.

The Massahattan Snap Tube Corporation found business a cinch. As they had no real labor force, they had no labor problems. Equipment breakdowns were nonexistent. There wasn't any equipment to break down. The station stayed clean, as Allie Schwartz seemed glad to sweep it out every night. With a constant flow of traffic there was no vandalism, no graffiti, and no insipid advertisements to read. It's idle feet and inane ads that attract trouble.

There were problems. Most occurred during the rush hours when up to four hundred people a minute passed through the corridor. Delays of up to three minutes weren't uncommon. But people kept their tempers and eventually worked out a system of one-way traffic themselves, which they enforced during the rush hours.

At one point, Wally proposed widening the doorway slightly, but neither Ernie or Artie agreed. "Hell," Ernie said, "we don't even know how it happened." So the "Snaps" remained a six-by-five passage through what had once been two Frigicoolers.

Not all the advantages of "Snaps" were immediately obvious. People were slow to notice the effect it had on their stomachs. The ulcer didn't disappear completely, but its incidence did drop sharply as Long Islanders discovered the time for an extra few moments of morning relaxation before the trek to the office. Coffee and tea sales soared. Maalox sales plummeted, as did the divorce rate and juvenile delinquency.

Other subsidiary benefits accrued. The air over western Long Island and Queens, formerly dark with pollutants, began to clear as the twice-daily inundations of Manhattan traffic ceased. People discovered that they could get as much mileage from their tempers as they could from their cars.

Needless to say, the Long Island Railroad staggered under the tremendous loss of revenue as the vast majority of its passengers switched to the Snaps. The LIRR

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responded in typical fashion. To cover the lost revenue, they raised their rates. One year after the Snaps began to operate, the monthly LIRR commutation ticket between Massapequa and Manhattan had risen to $353.50. Those few remaining rail riders had no trouble finding seats.

The railroad, reacting to the hot breath of bankruptcy, filed dozens of lawsuits to stop the Snaps from operating. The grounds of these suits ranged from unfair competition and restraint of trade to insufficient ashtrays per passenger. A defense fund for the Snaps was organized by its passengers. The railroad won no friends, and succeeded only in making itself look more ridiculous. After two years of competition with the Snaps, railroad service between Massapequa and Manhattan atrophied altogether, although it did pick up further out on the Island from Massapequa.

At the end of the third year, the directors of the Massahattan Snap Tube Corporation, meeting at their weekly penny-ante poker game and board meeting voted to change the fare on the Snaps. The following Monday, a large sign appeared over the turnstiles.

THE BOARD OF DIRECTORS OF THE MASSAHATTAN SNAP TUBE WISH TO THANK ALL YOU WONDERFUL PEOPLE FOR YOUR PATRONAGE. AS OF THIS DAY THE FARE OF A ONE-WAY PASSAGE WILL BE 5¢

A national television report quoted Ernie as saying, "What the hell. A nickel almost looks like a quarter, doesn't it? We've made more than we know what to do with. We're just three Joes who happened to get lucky. Why shouldn't we share some of our luck with our neighbors?"

That fall, Wally got almost half a million write-in votes for governor, despite announcements that he was running for no political office. "What do I know about being governor? I'm happy right here. Who needs the 'tsouris'?"

Wally, Artie, and Ernie ran the Massahattan Snap Tube for five years before being swallowed up by the Federal Transportation Board, the semipublic corporation created by fiat from the wreckage of failing railroads, airlines, steamship and bus companies. Desperate to find a solvent operation to offset the cost of running the huge bureaucracy it supported, the FTB was hungry for the most profitable venture of them all. While the bill to nationalize Snaps was being debated, the Long Island Citizen's Lobby,

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anxious to preserve their unique transportation system, fought the case all the way to the door of the Supreme Court before realizing their cause was hopeless.

So Snaps tumbled under the control of the Federal Transportation Department: Eastern New York Bureau: Rails and Ways Subsection. The director of FTD:ENYB:RWS, or "Any Bruises," as it was known among the commuting public, was a very tight-lipped career bureaucrat, Archibald P. Leggo.

Immediately after taking over the Snaps, Mr. Leggo announced "several major improvements to the Massahattan subsystem." The station was repainted and recarpeted in grey. High-speed turnstiles were installed, along with computerized directional signals. The express buses to and from the station were color-coded to match the station decor. Finally, the Snaps was merged with the Manhattan transportation system, which permitted free transfers to the buses and subways. It also meant that the Snaps fare had to be increased to bring it in line with the Manhattan fares. Resigned commuters accepted the $1.33 fare stoically. They had, after all, no choice.

They also had no choice when the edict from "Any Bruises" came to remove the change booths from the Snaps station. Exact change would be mandatory.

Of course, when the change booths went, along with the attendants, the vandals returned to the turnstiles just as they had returned to the crumbling gates of Rome two thousand years before. Skeptical voices augered the end of the Snaps as an effective means of transit.

At the time few heeded these pessimistic voices. Politicians pointed proudly to the fact that eight months of FTD:ENYB:RWS control had produced not one breakdown of Snaps operation despite nine city-wide subway strikes. Their claim, for the moment, was valid.

While those who actually used the Snaps daily seldom questioned the unknown principles on which it operated, many thoughts in other circles were directed towards this perfect method of moving things and people. Highly respected scientific papers were written, all positively explaining the phenomenon known as the "Massahattan Rift." Unfortunately, despite lavish government funding, dozens of experiments attempting to duplicate the Snaps failed.

The most commonly accepted theories about the "mechanics of the rift" swarmed around formerly discredited ideas about spatial

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distortion. The coolers were compared to, among other things, giant electromagnets mounted several feet apart on a carpet. One assumed that if enough electricity was applied, the two magnets would bow the carpet up in the middle till they locked through a "spatial variance."

One popular theory simply substituted the words "fourth dimension" for "spatial variance."

Several southern ministers also had some rather pointed observations about the origins of the Snaps.

Science fiction cognoscenti had a "field" day.

Scientists, who tend to be obsessive fanatics when the real hint of mystery is involved, had difficulty accepting their own slapdash theories about the Snaps. Petition after petition had been filed with the Massahattan Snap Tube Corporation asking for permission for "responsible members of the scientific community to probe closely into the mysteries of the miracle of the Massahattan Rift." Ernie, always dead-set against such threats, managed to get the board to deny the petitions.

Archy P. Leggo attempted to continue this sage policy, though more to guard himself against interdepartmental competition than to preserve the sanctity of the Snaps. Pressure from the scientific lobbies cost him his job. The technicians got their chance at the rift.

One Christmas Eve, a traditionally light time for commuters, a sign appeared on a plywood barrier at both ends of the corridor.

A TEMPORARY INCONVENIENCE TO ALLOW US TO SERVE YOU BETTER IN THE FUTURE

So, in the middle of the night, marauding bands of "responsible scientists" slipped into the Snaps station. The result of their incursion is well known.

A barrage of excuses were thrown up to deflect the recriminations which followed. A grand jury has been formed to investigate the situation.

The simple facts are clear. Two doctoral students ran a cable through the corridor to test for gamma ray emission. They heard a "high-pitched tintinnabulation" followed by a whirr and a clink. The long-lost brick walls irised in, a portcullis which cut the cable and separated one of the doctoral students scrambling in Massapequa from his foot in Manhattan by some fifty-one miles.

In the last month alone, Maalox sales on Long Island have quadrupled.

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In *Alternate Worlds*, the second full-length attempt at a historical consideration of science fiction, James Gunn says:

"One problem with trying to define such an amorphous field as science fiction is that every definition tends to include stories which any panel of critics would agree were not science fiction or to exclude stories that the same panel would insist were science fiction; historically, science fiction has been defined as 'what I mean when I point at it, or write it, or publish it.'"

SF is a great mystery. Gunn gives us some sense of the mystery by quoting consecutively no less than ten definitions or impressions of science fiction. In the middle, he pauses to call these definitions a sea: "a sea from which we will extract ourselves only with great difficulty and almost certainly without what we came to seek."

What did we come seeking? A pearl, an elusive treasure. Many have seen it, or think they have, but no one can capture it with words. A wonderful and powerful mystery.

Gunn rightly calls *Alternate Worlds* "a consensus history of science fiction." He closes his flurry of inadequate definitions with a definition of his own, which might serve as a fair consensus description of what science fiction has tried to

ALEXEI and CORY PANSHIN

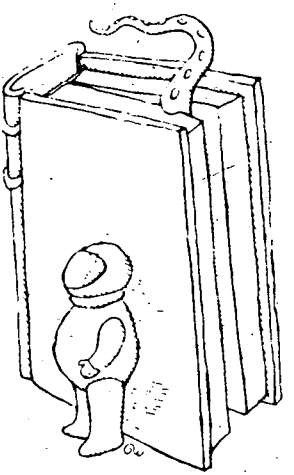
Books

Alternate Worlds: The Illustrated History of Science Fiction, by James Gunn, Prentice-Hall, $29.95

Science Fiction of the Thirties, ed. by Damon Knight, Bobbs-Merrill, $12.50

Science Fiction Handbook, Revised, by L. Sprague de Camp and Catherine Crook de Camp, Owlswick Press, $8.50

Reflections of A.E. van Vogt, by A.E. van Vogt, Fictioneer Books, $5



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be about in his time. He says, "My own definition has, if nothing else, brevity: 'In science fiction a fantastic event or development is considered rationally.'" Ever since Gernsback founded *Amazing*, emphasis has been put on the rational aspects of science fiction.

But Gunn recognizes the inadequacy of these definitions. The "science fiction" treated in *Alternate Worlds* is nothing like his definition. It is, in fact, that larger SF that we all implicitly recognize and which we cannot define. SF is a broad tent. It covers science fiction and structural fabulation, sci-fi and stf, speculative fiction and science fantasy.

Gunn's standard is ultimately his sense of work inhabited by the spirit of SF, not work which conforms to the letter of his definition. That is, he behaves as irrationally as a fan.

Rational definitions are inadequate not merely because they would kick the likes of van Vogt and Zelazny out of the tent. They take no account of mystery. They exclude the most important part of SF.

Among the impressions that Gunn quotes is this one by Isaac Asimov: "Social science fiction is that branch of literature which is concerned with the impact of scientific advance upon human beings."

However, at the outset of *Alternate Worlds* there is an introduction by Asimov entitled "Science Fiction, I Love You" that presents a very different picture of SF. He says that forty years ago, "I was only a kid, reading science fiction and experiencing in it an extreme of joy beyond description. I envy that kid, for I have never known such joy since and I never expect to. I have known other joys — the sales of stories, the discovery of sexual love, the earning of advanced degrees, the sight of my newborn children — but none has been as unalloyed, as all-pervasive, as *through and through*, as reaching out for a new issue of a science fiction magazine, grasping it, holding it, opening it, reading it, reading it, reading it..."

It was not science and rationality that we sought so joyfully. It was the pearl. It was SF.

Irrationality was a dirty word in the era that is now closing. Science fiction could not then admit itself to be irrational. But the time has now come when the leading edge of contemporary science has specifically disavowed rationality. It is possible now for SF to come out of the closet and admit to its own irrationality.

The fact is that science fiction writers have always been led by their intuition like sleepwalkers off in a dream. SF stories mean more than their authors know.

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And how could it be otherwise? SF not only cannot be rationally defined, but there is no common language by which one SF writer can talk to another about his work. Lafferty cannot talk to Le Guin. Le Guin cannot talk to Heinlein. Heinlein cannot talk to Panshin. Panshin cannot talk to Zelazny. The *SFWA Forum*, the inner journal of the guild of stf writers, is not a forum for the discussion of SF.

The writer of SF has only his intuition to guide him, his sense of the mystery. In SF stories, those things that matter most are mysteries, transcendent powers and beings that lead and elude understanding like a will-o'-the-wisp. These mysteries yield knowledge and exceed expectation. They shimmer when they walk.

SF is like the things it portrays. It is a transcendent mystery.

The old rational standards by which we attempted to judge science fiction have been shown to be inadequate. New standards vie for attention. One standard we might apply to books presented for consideration is their relationship to the mystery of SF.

Alternate Worlds: The Illlustrated History of Science Fiction is a minor mystery all in itself. It is a large, handsome, and expensive tablebook. It is a miracle that it should have been published in a recession. To what audience of millionaires is it addressed?

The text of the book is James Gunn's consensus history of science fiction. He has mined the work of previous commentators and homogenized it. He has added his own store of personal knowledge and experience of SF as a reader and writer and teacher. His account of science fiction may fairly be taken as the Sound Opinion of his day, crystalized essence of 1953.

In addition to Gunn's consensus, *Alternate Worlds* contains pictures. There are book covers, balloons, a Model T, Hugo Gernsback, Homer, Raymond Z. Gallun, Harlan Ellison, Larry Niven, Dean R. Koontz and David Gerrold. There is a picture here of almost anyone you might want to see except Ursula Le Guin. More than anything else, however, there are pictures of magazine covers.

These are just the black-and-white and sepia-tinted pictures. There are, besides, five sections of color plates, 32 pages in all. Two of these pages are of photos from the 1971 World Science Fiction Convention in Boston, including a picture of Astrid Anderson in the guise of a mermaid. The other thirty pages are of more SF magazine covers. As though the sight of the covers might reawaken some suburbanite's remnant memories of the joy he once felt when he

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was a boy and first bought, yes, that very issue of *Astounding.*

What a strange time the Fall of 1975 was! In one sudden burst we were presented by different publishers with not only *Alternate Worlds,* but no less than four collections of SF illustration — one of them by Lester del Rey, one by Brian Aldiss, one translated from the French. Not to mention a collection of the art of Frank Frazetta. Eight or ten years ago, the proposal of a collection of SF illustrations was not considered to be of interest. In the ripeness of this moment, however, publishers seem to be convinced that we want to see the face of yesterday's tomorrow once again.

Probably we do. But why now? Why is it SF illustration time *now?* It's a mystery.

It is also SF history time *now.* Aldiss was first. Gunn is second. there will certainly be more.

Aldiss's *Billion Year Spree* and Gunn's *Alternate Worlds* shed light on each other. According to Aldiss, "Science fiction is the search for a definition of man and his status in the universe which will stand in our advanced but confused state of knowledge (science), and is characteristically cast in the Gothic or post-Gothic mould." But Aldiss's account of SF is exclusive. He values literary excellence and appreciation of the fallen state of man, and he is not in sympathy with pulp SF.

By comparison, Gunn's book is loosely and offhandedly written, unoriginal and generally superficial. Even so, his sense of the true mystery of SF has produced a book that makes *Billion Year Spree* seem sterile, narrow and ungenerous. It is not by accident that the first comment on the nature of science fiction that Gunn prints should be this one by that closet irrational, John W. Campbell:

"Fiction is simply dreams written out. Science fiction consists of the hopes and dreams and fears (for some dreams are nightmares) of a technically based society."

Gunn's formal argument in *Alternate Worlds* is narrow and outmoded, but he doesn't fully believe in it anyway. The book is broader than its arguments. A youthful Asimov might look on it with wonder.

You might want to glance through this book at your library. Or catch it when the price comes down.

The science fiction of the Thirties is almost unknown to contemporary readers and writers. It was the immediate predecessor of the Campbell-era SF that is so familiar to us all. But in the years since 1946, the years of SF book publishing, Thirties' science fiction

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has remained largely unreprinted. We only know of it what we have been told. What we have been told is what Damon Knight tells us at the outset of his anthology, *Science Fiction of the 30's:* "The earliest science fiction anthologists, surveying the field as they knew it, found most of the S.f. of the thirties inferior in style and content to the new science fiction pioneered by John Campbell in the forties."

But is it true that the SF of the Thirties was so unworthy as not to deserve reprinting? These were the stories that thrilled Isaac Asimov beyond any joy he has encountered since or hopes to encounter. These were the stories of a time in which SF rapidly metamorphosed, in the space of a decade changing from Burroughs and Merritt to Heinlein and van Vogt. But the actual fiction of the Thirties is hidden to us. We know it only as strange titles by forgotten names in the Day Index. How are we to reconcile Asimov's childhood perception with what we have been told about the patent inferiority of these stories?

If Science Fiction of the 30's were all the evidence available to us, we could quickly agree that Thirties SF was inferior and of no interest and let the matter drop. This anthology is a museum of futility and failure. There are no lost treasures here to make a young reader of today giddy with delight. Everywhere there is desiccation and dust, everywhere empty husks from which the spirit has flown.

Are we who seek to find traces of light in the SF of the Thirties inevitably to be disappointed? Not necessarily. Not inevitably. There was some light to be found in Asimov's anthology, *Before the Golden Age,* and considerably more in Jacques Sadoul's collection of stories from *Astounding.*

One crucial difference between Asimov and Knight seems apparent. Asimov selected his stories from those he had loved as a child. He remembered his sense of the spirit of SF and honored it — and his selections still manage to hold some mystery and wonder for us.

On the other hand, Knight, compiler of avant-garde *Orbit* volumes and author of *In Search of Wonder,* has edited *Science Fiction of the 30's* as though he were Hugo Gernsback. His stories are those that demonstrate stock SF ideas for the first time or which anticipate later and superior stories. Or they are stories which seem to prevision the science or the facts of today. There are stories here of star voyagers bollixed by the time contraction paradox, stories of bee language and mammals breathing water, stories of energy crisis and urban disorder. But Knight's stories are dead, whatever their precedence may have been. If Knight

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had remembered himself and sought wonder in the Thirties instead of pseudo-science, he would have served SF and our needs better.

In 1953, the best understanding of SF to be found was L. Sprague de Camp's *Science-Fiction Handbook*, a marvelous and ungainly book issued in a how-to-write series. It was a stewpot of everything de Camp could imagine a writer of SF needing to know. Practical advice. Basic tips on writing. Inside anecdotes. Biographies of writers. Contemporary market reports. The first major historical account of imaginative fiction, original scholarship on which Gunn's consensus merely expands today.

The book was de Camp's farewell to science fiction writing. Like the Gunn, but even more so, it was successful in spite of its faults. It served the mystery. Almost by accident, *Science-Fiction Handbook* caught some sense of the dynamic multiplicity of SF at one particular moment in time. A generation of readers used it to consolidate their impressions of SF. A generation of aspiring SF writers learned from it, found clues in it, used it as an oracle.

Science-Fiction Handbook reflected the spirit of SF in 1953, but more than twenty years have passed now and the old book does not display the spirit as brightly as it once did. And yet, here it is reissued in 1975 as *Science Fiction Handbook, Revised*, by L. Sprague de Camp and Catherine Crook de Camp.

And how, pray, has it been revised? By abridgment. A ruthless hand has passed through the original book and taken away from it all that was particular of 1953. A venerable classic has been consistently simplified, softened and trivialized. De Camp's once-original scholarship now reads as though it were someone else's work that the de Camps were dimly repeating. All that is left intact, more or less, is the practical advice of a man who ceased to write science fiction twenty years ago. This advice is not adequate to the problems of writing contemporary SF.

A knife was raised over *Science Fiction Handbook*. With the first stroke, the spirit flew. Another husk.

Along with Robert Heinlein and Isaac Asimov, A.E. van Vogt must be counted one of the three major SF writers of the Forties. Even though van Vogt ceased to write science fiction through much of the Fifties and Sixties, and has not made much impression with his recent work, he remains, along with Heinlein and Asimov, one of the

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three major SF writers of the whole era that is now passing.

Van Vogt is a problem that the new historians of SF like Gunn and Aldiss must surely come to terms with. Those like Aldiss who value literary excellence cannot approve of van Vogt. He is foggy, semi-literate, pulpish and dumb. Those like Gunn who value rationality must admit, as Gunn does, that "van Vogt's stories did not attempt to present a rational picture of the world." And yet, anyone with any sense of SF must acknowledge the true power of van Vogt's work. A power that the present critical understanding of SF is totally inadequate to deal with.

We are now privileged to have a small paperback autobiography entitled *Reflections of A.E. van Vogt,* published by Fictioneer Books, Lakemont, Georgia. It is based on twelve hours of interview conducted for three universities in 1961, but altered, rewritten and brought up to date by van Vogt.

It is a strange and disconcerting book. If you believe van Vogt, he had a normal childhood in Canada and grew up to write confession stories. By chance he saw the August 1938 issue of *Astounding* with John Campbell's "Who Goes There?" and was hooked. Within less than a year, his own fiction was appearing in *Astounding.* In another two years, John Campbell was willing to commit himself to buying two to three hundred dollars worth of work a month from van Vogt. And, as though caught in some bizarre dream, van Vogt found himself writing science fiction stories "from the time I got up until about eleven o'clock at night, every day, seven days a week, for years." For years, van Vogt says, he had no idea why he was writing science fiction.

And yet, van Vogt considers himself a thoughtful and rational man, a practical person without much imagination in everyday affairs, a writer whose proper place was *Astounding* and not *Unknown,* for which he could not comfortably write. Van Vogt even says, "Other writers may be able to work on intuition, but I can't."

But this same man says, "I dream my story ideas in my sleep." He doesn't plot his stories consciously. Instead, he programs his dreams and writes down the results. His consciously plotted stories never sell.

Van Vogt prizes his special ability to write what he calls "fictional sentences." Like a transcendent power, this ability comes and goes, but it animates and legitimizes van Vogt's fiction: "Every once in awhile I realize, 'Oh, I'd better describe something in fictional sentences. I need some enduring reality.'"

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Van Vogt gives an example of his method. He says, "What leads up to this passage is that the protagonist suddenly realizes he's been poisoned by something that he's touched while lowering himself on a rope":

"'A pang went through his body and was followed instantly by a feeling of rigidity. With a gasp he clutched at his blaster intending to kill himself. His hand froze in mid air. He toppled stiffly unable to break his fall. There was a sharp contact with the hard ground. Then, unconsciousness.

"'The will to death is in all life. Every organic cell ecphorizes the inherited engrams of its inorganic origin. The pulse of life is a squamous film superimposed on an underlying matter so intricate in its delicate balancing of different energies that life itself is but a brief vain straining against that balance. For an instant of eternity a pattern is attempted. It takes many forms but these are apparent. The real shape is a time and not a space shape, and that shape is a curve up and then down. Up from the darkness into the light, then down again into the blackness. The male salmon sprays his mist of milk onto the eggs of the female and instantly he is seized with a mortal melancholy. The male bee collapses from the embrace of the queen he has won, back into that inorganic mold from which he climbed for one single moment of ecstacy. In man, the fateful pattern is impressed time and again into numberless ephemeral cells but only the pattern endures.'"

It is not by accident that van Vogt writes like this. It is a matter of deliberate choice. "I believe that the reality resulting from this and similar passages in my work, has made my science fiction more enduring than that of most sf writers," says van Vogt.

"My work has been somewhat invalidated by critics who are determined to force mainstream techniques on science fiction; but we'll just have to wait and see who wins in the long run.

"My wager is on my method of presenting science by way of fictional sentences, and on the timeless reality that must underlie the dreaming process, when it is used consistently as I have done."

Wrestle with *that,* ye Gunns and Aldisses. It's a challenge that must be answered.

ANSWER TO JUNE ACROSTIC PUZZLE

Clues read down: Thomas Disch, Camp Concentration. Quote reads: In another generation cybernation will have advanced far enough that the solitary genius will come back into fashion providing he can get a grant large enough to supply him with the battalions of self programming computers he will need.

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Here is a striking and unusual fantasy about a sixteen-year-old and his pigeon flock on New York's lower East side. George Alec Effinger's latest book is IRRATIONAL NUMBERS, a collection of stories recently published by Doubleday.

B. K. A. The Master

by GEORGE ALEC EFFINGER

Roland woke up one morning and felt like he'd lost something. He thought, "Well, yeah, if I lost something, I'll get another one." He was only sixteen, and he lived on 5th Street between Avenues B and C, and he didn't have much that he could lose.

He got dressed and went into the kitchen. His mother had already gone to work; his brother Roberto and his two sisters were already out. Roland took a box of cereal out of the refrigerator and poured himself a bowlful. He didn't put milk on it; he carried the bowl back into the living room and put on the television. As he watched tv, he ate handfuls of the cereal. And he felt uncomfortable, nervous, just a little edgy. After he finished eating he took the bowl and put it in the small, foul-smelling sink in the kitchen. Then he put on his denim jacket and went out. The jacket had its sleeves removed, and on the back a girl had embroidered the words *Emperors of 5th Street*. Among the words was a kind of yin-yang symbol made up of a black fist and a white fist.

It was late in September, and the weather was beautiful. The air was clear and the sky a deep blue. Roland felt better outside. The feeling that had bothered him disappeared. He walked west along 5th Street. No one else was around; some of his gang might have gone to school; some others might still be asleep or hung over or nodded out. It was too late in the morning for the old men who sat out all night, and too early for the old women who sat out all afternoon. A few stray dogs loped along the sidewalk, sniffing at garbage cans. When they passed Roland, the dogs gave him a kind of uninterested, sideways look. They had nothing to fear from Roland. He wasn't very much better off than they; after all.

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he didn't even know where the rest of his gang was.

The Empire State Building looked bright and steel gray in the early sunlight. It looked clean. It made the morning feel even sharper and healthier. It was while looking at the building that Roland heard the voice. "Roland?" it said. The voice was masculine and deep, yet a little hesitant.

Roland stopped where he was on the sidewalk. The voice was obviously coming from the inside. He didn't even look around. Roland was suddenly scared. His throat and mouth were dry. He could hear the blood rushing in his ears. He felt a little lightheaded. This hadn't happened to him in a couple of months; the trouble was that this time he was completely straight. He had laid off the drugs since he had started raising pigeons. He was putting all of his drug money into the birds. That was why the voice bothered Roland so much; he didn't have an easy explanation for it.

"Roland?" asked the voice. "You have to fight for us, and for yourself."

"Hey, man," said Roland, rubbing his forehead with his sweating hands, "I ain't gonna fight nobody. What is this?"

"You will have to be strong, Roland," said the voice. "You are not a hero, and you are not bold, but you will have to learn what is right."

"You want to leave me alone, man?" said Roland hoarsely.

The voice did not come back. Roland waited, his ears ringing. He gave a nervous belch. Then he tried to forget the incident. He walked on along the street. The feeling of loss that he had had when he woke up grew on him almost overwhelmingly, then faded slowly. By the time that he reached 2nd Avenue he felt normal, but a little frightened.

Roland turned uptown on 2nd and walked a few blocks to the pet shop. This was where he spent most of his time when he wasn't at home or with the Emperors. The store was small, even by the standards of the neighborhood. There was a small front window mostly boarded over, with a green sign that still advertised a shoe repair store that had been by no means the last tenant. The front door was an unpainted sheet of galvanized steel, covered with a lot of spray-painted or felt-tipped graffiti. The door was propped open at an angle with a wooden case and a brick. Over the door was a piece of cardboard, on which the owner had painted in crude letters, *Palomas blancas y de color.*

Roland went into the store and was greeted by Moss, the owner. Moss wasn't Spanish, but his sign

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was for the benefit of his customers, most of whom were. "Hey, Roland," said Moss, looking up from his labor, stacking sacks of feed against one dark wall.

"Hey, man," said Roland. The boy sat down and watched. Sometimes Roland just watched like that for a couple of hours, without ever again saying another word. He liked to be in the shop, to see the birds that Moss had and to see the customers. A lot of Roland's friends had their own pigeon flocks, and the store was a good meeting place for them. Then, too, sometimes Roland got an idea about who might be trying to rustle away some of his own flock, just by listening to the conversations between Moss and a stranger.

Moss stocked a few puppies, mostly German shepherds that were bought and trained as guard dogs. He also sold a steady supply of roosters to his Spanish clientele; these birds were pitted against each other in cock fights. The fact that the sport was illegal never hurt his sales. But his chief stock in trade was in pigeons. Moss had almost a thousand different birds in his shop each day. His business was brisk and his turnover was rapid. The birds were of many different breeds and colors. Some of them sold for two dollars. Others went as high as fifty. On a good day, Moss could take in almost five hundred dollars above his costs; this was in a neighborhood in which the large majority of the residents were on welfare. Moss only shrugged when a new customer mentioned that fact. Welfare people were entitled to hobbies, too, as far as he was concerned.

"Hey, Roland," called Moss, "you got any new birds for me today?"

"No, man," said Roland. "I ain't pushed up my birds yet today."

Roland stood in a huge cavern. Light spilled down in arrow-straight, arrow-sharp beams from a ceiling too far above his head to be seen. The walls of the chamber were likewise at a great distance and shrouded in darkness. There was a single shaft of light illuminating a kind of table about thirty yards away. Roland walked toward it. As he got closer, he saw that it was an altar, made of stone cut from the same rock that formed the rough floor. There was nothing on the altar but the light.

"No," said the voice inside him. "You must avoid light. You must avoid anything that seems holy. You must learn these things quickly. Go into the shadows."

Roland stopped and looked around him. He had no desire to leave the light, spacious area and walk into the cold and evil

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darkness. But he did as his voice ordered. When he left the light, the sense of loss that filled him lessened somewhat.

Roland felt the touch of something on his back. It was warm and wet, and as the thing moved slowly toward his head, it left a gritty trail on his skin. Roland could not make a sound. He discovered that he couldn't move, either. The voice encouraged him to fight. All that he wanted to do, really, was scream. If he could scream, it might make things better....

Roland walked out of the pet store without saying anything to Moss, who was still busy stacking the sacks of feed. The day had not changed. Roland almost expected the sky to have blackened; no, the sun still shone brightly. Roland wondered what had happened to him. Maybe he had just fallen asleep in the store and dreamed. He knew that he was just trying to tell himself that, so that he wouldn't worry. But he knew very well that it wouldn't work. It was fine for now, but it wouldn't help when the thing happened the next time. And somehow Roland was very, very certain that it would happen again.

Still, there didn't seem to be anything that he could do about the situation. He laughed softly when he pictured himself going up to a cop and saying, "Hey, man, you know, I'm seeing things." He'd end up in Bellevue for an hour, and the doctors wouldn't listen to him or give him anything. If he looked like he could get home on his own, he'd be kicked out.

So Roland walked by the deserted apartment houses, abandoned alike by disgusted tenants and landlords who couldn't afford either repairs or taxes. He headed back to his own building, putting the voice and the dream out of his mind; that was a valuable talent to have in Roland's neighborhood. He thought about other things. He thought about his birds.

When Roland got back to his building, he climbed up the stairs past his own floor and went onto the roof. He had built a coop for his pigeons there, conforming to the city health department's rules. They didn't mind people keeping pigeons in the city, as long as their more or less arbitrary conditions were met. They reasoned, if that is quite the correct term, that a pigeon fancier wouldn't allow diseased birds in his flock, risking his own birds. Therefore, the flocks were on the whole healthier birds than the street pigeons and less of a hazard to people. No one considered that most of the pigeon keepers were ignorant about pigeon diseases and their symptoms.

Roland's coop sat in the middle of the roof. He had built it out of

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new two-by-fours and chicken wire. It was four feet high and five feet on each side. He had put in a solid steel door and four locks. That was two locks more than Roland's mother had on their own front door downstairs.

The cooing of the birds calmed Roland. Here, he was the master. These were his birds. They obeyed him. Their gentle noises seemed almost like murmured worship to him. He felt a strong attachment to his flock, the bonds that held a master to his vassals.

Roland looked up into the blue sky. He saw a pigeon fly overhead, a stray. There went an opportunity to enlarge the flock. Roland shrugged. There would be many more.

He opened the door of the coop and went in, bending low through the small door. Inside, he took a broom handle and started to push some of the birds to the opening. The older birds, who had been trained over a period of time, did not resist. They flew out and circled the building about twenty feet above the rooftop. The other pigeons followed them, around the black and sooty roof in a constant circle. Roland left the coop and stood beneath his flock, making a slow circle with his broomstick. The pigeons followed his lead; when he pulled the stick down sharply, the pigeons flew toward the ground. When he changed directions, the pigeon flock followed him.

"I'm the master!" shouted Roland. His birds gave him a pure elation that nothing else had ever matched. It was a feeling of control, a feeling that he could repeat any time that he wanted, without being dependent on money to buy it, without knowing that sooner or later he would crash from drug-induced heights. There was so little in his life that he could control. "Hey, birds! I'm your master!" And they flew obediently above him.

He saw a stray pigeon flying nearby and directed his flock to intercept it. The stray merged with the flock; Roland had a new bird. Sometimes he got the bird of a richer pigeon breeder, one of the more sophisticated birds, one that would bring upwards of fifty dollars at Moss' shop. It did not happen often, but it happened to Roland, and it happened to Frodo, down the block, whose flock was larger than Roland's, and it happened to the old Ukrainian couple on 6th Street. They always sold the birds to Moss. Roland always killed them, because he knew that the rich guys always wrung the neck of the cheap birds they acquired by accident. The rich guys hated the poor pigeon raisers, and killing their stray birds was the only thing the rich guys could do to hurt people like Roland. It wasn't much, but killing the occasional

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expensive bird was the only thing that Roland could do to hurt the rich guys. Roland wondered if they ever noticed.

"You stupid birds!" he shouted. The sense of loss from before had been replaced by a feeling of completeness. It was Roland's soul that was flying so freely above him. A great, beating, living soul. Sure, it had to be cooped up for most of the day. But everyone else's was cooped up all the time, anyway. Roland's soul got to fly around. "I'm your master!" he cried.

The light from the sun died a few feet from the cave's entrance. Roland sat in the dimness, on the floor of the cave, in a stinking muddy area near one wall. The stone of the wall was wet, and the dripping of the moisture made a loud irritating sound in the stillness of the afternoon. As Roland sat, waiting, afraid, he felt large, slow, heavy insects crawling across his legs and his hands. He was too frightened to move.

Beyond the edge of the cave was a forest. The trees seemed cool and clean, their leaves were dark green and healthy. A gentle breeze rustled the boughs; birds chirped among the branches.

Roland raised himself up on his knees to look out. As he did so, an unseen vermin fell into the muck with a sickening noise.

"Don't go out there," said the voice in his head. "There is only evil out there. Stay here. Stay where you are safe."

Roland still could not answer. He felt another thing crawling slowly up his arm; he shook the arm and flung the creature against the wall of the cave. He heard it hit with a cracking sound. How could the cave be safer than the wholesome forest outside? Why did the voice urge him to choose darkness and corruption over light and purity?

"Who decides which is purity?" asked the voice. "You must fight in a way that is new to you. There is nothing to hit or to kill except within your mind, and there you will find only ideas. Some of your ideas must die, or you will be lost. Here you are safe. You are doing well."

The broom handle pointed waveringly at the sky. The pigeons flew around, making Roland dizzy with their passage. He was afraid, more afraid than he had ever been, straight or stoned. But the flight of his pigeons reassured him a little. His life was so small, so meager, that it didn't pay any evil force to try to tear control away from him; and if Roland thought about the possibility of insanity, he had only to concentrate on those pitiable limits of his world, and everything

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quickly regained its proper perspective.

"It is a matter of definition," whispered the deep voice. "What is right is wrong. You cannot trust yourself to decide. But I will help you. You have won two battles, and you are closer to victory. You do not know what is happening within you, and there is no way that you can learn; you must have faith, which is always good. Faith is the connecting link. Faith is the sword you will use to win your life."

The pigeons flew around and around. Roland did not want to listen to the voice. He had not acted on faith, in either of the two dreamlike situations; he had been paralyzed with horror. Now, though, he was again the master of the pigeons. He ordered them, and they obeyed. He was master of the birds. He was master of all birds, of all things that they might see from the air. He was master of all.

He brought down the stick quickly, and the birds dove in a tight steep plummet towards the rooftops. He raised the stick, and the pigeons climbed upward again. How could the master be the pawn in some meaningless struggle? The master used others; he would not be used himself.

"You do not understand," said the voice. The voice was correct, but the voice did not comprehend that Roland did not need such understanding. And he did not want it.

He brought the birds down, and the leaders of the flock went docilely back into the coop. Roland recognized his birds, and he saw that they had brought in three strays. One of the strays was a white pigeon, a dove. The other two were plain street birds. He took the dove and examined it; it didn't seem to be in bad physical shape. He put the bird down and picked up one of the others; he checked it, too, for any gross signs of disease. There were none. Roland quickly wrung the bird's neck, killing it soundlessly. The boy was fond of his flock, but with two new strays and a money bird, Roland could afford to bring down a pigeon to his mother for supper. He carried the dead bird and the dove downstairs. He left the dead pigeon outside his apartment door. He carried the dove in both hands, down the rest of the flights, outside, and along the street to Moss' pet store.

"Hey, man," said Roland when he walked into the shop. "I got you a bird."

Moss looked up and rubbed his neck. "What you got, Roland?"

"Here," said Roland, giving Moss the white pigeon. He thought about where the dove might have come from, perhaps from the flock of a rich breeder. The rich guys hated it a lot when they got one of

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the cheap birds mixed into their flocks. They always wrung the plain birds' necks immediately. Roland might have killed the dove, except that it wouldn't have hurt the rich guys any, and Moss gave twice as much for a dove as for a plain bird.

"Great," said Moss tiredly. "Here's your four bucks. This little goody will be dead by midnight. One of your mama's will make a love potion out of it."

"My ma would use it to find her slippers," said Roland. "It's easy. You kill a white dove, pray a little, burn a candle, and look under the couch."

"Never fails," said Moss.

"Nope," said Roland, folding the money and walking out of the store. He stopped in a bodega and bought a few things. The next day, he would have to buy a bag of feed, maybe three dollars' worth; another good bird, or two plain ones, would take care of that.

"You have to be ready," said the voice, as Roland walked slowly back to his mother's apartment. Roland was learning to ignore the voice. He stopped by one of the gutted buildings, where the doorways on the ground floor had been blocked by sheets of steel. He took out a felt-tip marker and wrote on the metal: *Roland as The Master.* On another wall he wrote: *The Master I* and *Emperors of 5th Street.*

"You must prepare yourself," said the voice. Roland did not even flinch when the words whispered through his mind.

Roland was inside a large rotting house. It was twilight, and the only light to see by came through the cracked windows of the ancient mansion. The parlor in which he stood was once stylish and richly appointed, but now the furniture had completely fallen apart and the fabric coverings were grossly spotted with fungus and stains. The dust everywhere was thick and black. The odor in the room was almost suffocating. Roland thought that he would have to leave the chamber or risk getting ill. He wandered slowly through the room, in a kind of dreamlike trance, touching nothing, seeing everything, fearing what yet hadn't materialized.

Beyond the parlor was a narrow hallway. The choking smell of the room seemed to concentrate itself in the passage. Roland put a hand over his mouth and stumbled on, but he was almost overcome. At the end of the passage were three doors. Behind two of them were rooms in much the same condition as the parlor, their distinctive elements long ago vanished into decay, their few pieces of decoration or furnishing ruined and eaten by the most filthy contamination.

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Behind the third door, however, was a room very much unlike its neighbors. Lights of burning kerosene were mounted on the walls, so the place at least had a more cheerful atmosphere. The wallpaper was not moldy or peeling, and at Roland's touch it was dry and clean. The furniture itself was polished and in fine repair. There was a canopy bed, a large round table, four chairs, a bureau and mirror, and a long low cedar chest. No evidence of the dust that had come to fill the other rooms in the years of disuse was apparent in this room. That aspect, the condition of the furniture, and the fact of the burning lights led Roland to guess that someone, however eccentric, had used this chamber regularly and recently.

"This is Hell," said the voice. "Go back outside, where you are safe, where your soul does not risk defilement, as it surely does here."

Roland, for the first time, was able to answer his secret director. "How is it," he asked, "that you are always leading me away from places that look pretty fine to me, man, and making me hang around in garbage? If I want to hang around in garbage, man, there's plenty of that without even leaving my block. You don't have to go through all this stuff, man."

"Quickly," urged the voice. "Do you not see how Satan may make Hell appear pleasant, and may make the most sacred spots appear filthy, for his own purposes? To him, and to you, white is black, clean is an abomination, day is night, pure is defiled. Now, as before, you must leave before it is too late."

Roland shrugged. He didn't want to be there at all. He left the pleasant room and went back into the corridor, where the obscene smell nearly made him vomit.

With unnatural suddenness, particularly under the circumstances, Roland became extremely sleepy. It came on him like a wave of sea water at the beach; he reeled backward, putting out one hand to steady himself, recoiling at the touch of the damp disintegrating wallpaper. "I got to crash, man," he said.

"Certainly," said the voice. "This is the attack for this occasion. I was expecting it."

"Well, dig it. I'll see you tomorrow." And Roland turned to go back into the brightly lit room.

"No!" cried the voice. "You can't go back in there."

"I got to sleep, man," said Roland, a note of anger in his voice. "They got a bed in there. You want that I should just curl up in the hallway? In one of your other rooms? Man, you must be the toilet cleaner for the universe." And the boy went back into the room,

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sighing at the relief from the smell outside. He went straight to the bed, pulled back the covers, climbed in, and was immediately, completely asleep.

"No!" shouted the voice, but it did no good. The voice sounded full of despair and pity.

Roland was eating supper with his mother, his two sisters, and Roberto, his brother. The pigeon had been disjointed and fried, and Roland's mother had made a rice and pepper dish to go along with it. Everyone drank Dr. Pepper, a treat that Roland had brought home. The spirits of the family were high; they were generally happy, even though their income was low. They had enough, and they didn't feel like worrying about the rest.

While Roland was lifting a forkful of the rice, his inner voice spoke to him. This time the voice sounded different; the very oddness of the voice chilled Roland, long before the significance of the words began to take on meaning. "You have made a great mistake," said the voice. "There are times in the lives of men when they are called upon; sometimes they are called by conflicting interests, and a choice must be made. You have been called in such a way. You have made an incorrect decision."

"Look," thought Roland, "so let me take it over again."

"You have forsaken the more troublesome path of good and chosen the easy highway of evil," said the voice with finality. "There is nothing more to be said about the matter. There are no second chances. Many men, the majority of people, choose comfort over principles. I had thought that you were different, that given a chance, you might develop into a moral standard for all men and all time."

"I'm sitting here, eating one of my own pigeons," said Roland contemptuously. "I live in a rundown little apartment. I ain't never going to do anything in my whole life except hold stupid jobs. And you want to make me into I don't know what. Man, you don't know what *is*."

"You have had your chance, and you have failed. There is nothing but pity in my heart for you."

"Look, man," thought Roland. "I never asked you for nothing. You never told me what was going on. I never knew what the big stink was about. And now you're going to come on like I knocked over a gas station or something. Hey, man. You want to go down to juvenile court or something?"

There was no word from the voice. Its silence intensified the same feeling of loss that Roland had experienced earlier. The feeling grew and grew, until Roland

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couldn't sit at the table any longer. "Come on," he said to Roberto. "Let's check the birds."

"You stay until you finish eating," said Roland's mother. The two boys ignored the order and went up to the roof.

When Roland and Roberto reached the pigeon coop, there was bad news. The coop was empty. The door was locked, and there didn't seem to be any sign that someone had forced it open; still, inside, every bird was gone. It was very quiet, and in the evening warmth the silence was heavy.

"Wow," said Roberto.

"Yeah," said Roland. He was furious, but for the moment he was helpless. "Come on."

"Hey, Rollie," said the younger brother, "where we going?" Roland didn't answer; the master had responsibilities to his flock, too.

The two boys went back downstairs and out into the street. A little while later, they were at Moss' shop. "Hey, man," said Moss.

"Yeah," said Roland, seething. "Anybody buy that white pigeon I brung in?"

Moss laughed. "Yeah, right after you left. This guy that has this classy bunch of birds over on the corner of 5th and B came in. He said one of his pigeons had been ripped off. He was real mad. He said it was guys like you that cost him a lot of money. So I sold him the dove to replace it. Got ten bucks for the bird. He said it looked just like the one that was missing. I didn't want to say anything, so I says they all look alike. He just nodded. When he was going out, he asked my old lady where the bird came from. She's not too swift, I think she told him."

"It fits, man," said Roland. "The bastard ripped off my whole flock."

"Your whole flock?" asked Moss. He stared; Roland and Roberto left the store. Roland knew what he had to do.

Fifteen minutes later the two brothers were stepping across the rooftops towards the coop of the rich guy. Roberto carried some rags soaked in gasoline. Roland carried some broken table legs and a box of matches. They arrived on the guy's roof. There was a coop there, all right, larger than the city allowed. Most of the birds were white pigeons; Roland recognized his own flock mixed among them. "You know," he said to his brother, "you send up one, two, maybe three good homing pigeons, and they mix with a flock, man, they can bring that whole flock back with them. These guys are really something." The two began shoving the rags and the wood through the holes in the chicken wire.

"Some of them is yours," said

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Roberto. Roland didn't answer. He lit the fire; in a few moments the blaze grew and spread through the din of the fire and the crazed screams of the dying birds.

"We got to stop this kind of stealing," said Roland.

"But the birds didn't do anything to deserve that," said Roberto, as they turned and hurried from the roof. The fire would be discovered soon.

"I ain't doing it to the birds, man," said Roland with some annoyance. "I'm doing it to the rich bastard."

"It has begun," said the deep, sad voice within him. Roland only shrugged.

The next day, he bought a couple of birds from Moss and started over. He had to train them from scratch; he had a lot of work to do. While he stood on the rooftop, the voice within him spoke. "Aren't you concerned?" it asked wonderingly. "Your failure and your choice of evil has cost you your soul. How can you go on, knowing this?"

"I don't know nothing," said Roland through clenched teeth. "You never told me nothing, nobody never told me nothing. I can't lose nothing like that. Maybe I was ripped off, but it sure wasn't my fault."

"I told you what you had to do, and you didn't listen," said the voice. "Now, and for the rest of your life, and for the rest of eternity, you must live with the result."

"Up yours, man," said Roland. He moved his broom handle in a circle, and his tiny flock of pigeons flew around him. He didn't feel like The Master anymore. He didn't feel like he controlled anything. It was not his soul flying in the air any longer; maybe the voice was right. Maybe he had lost his soul. But if he had, it was in the most crookedly rigged lottery he had ever seen.

"Satan does not care about that," said the voice. "He has your soul."

"Well, then," said Roland, taking a deep breath and staring at his birds in the sky, "if he don't care, man, why should I?" Roland saw that his puny flock had already incorporated a new stray. It was just as he had felt the morning before: if he had lost something, well, he'd just get something new. He had things to do.

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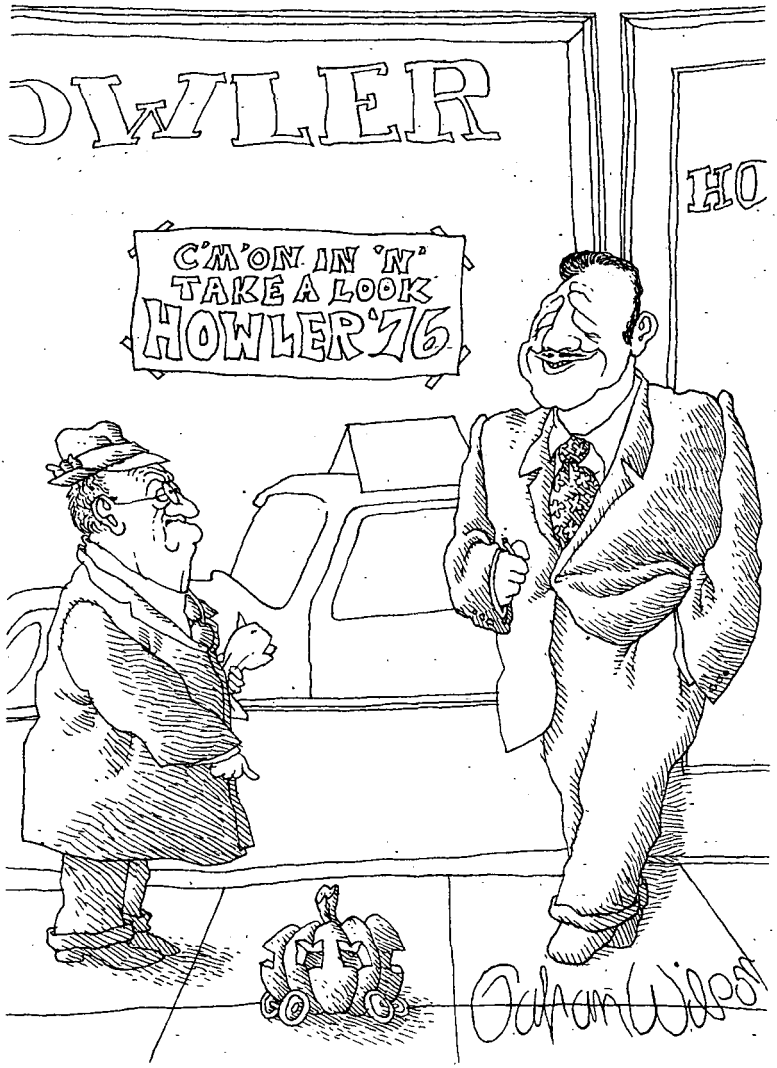

"I'm sorry, Mr. Cheever, but there's absolutely nothing in your warranty about the howler turning into a pumpkin."

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Concerning a man who collected chairs...

The Sitter

by CHARLES W. RUNYON

As they sailed across the choppy water, Le Chat asked him, "Why you seeking chairs?"

And Talbot answered, "I collect them."

"Ah." For a long time the black man gazed at the black brooding cliff of the island, one hand on the tiller and the other on the rope that controlled the boom. Talbot hoped he would accept this *non sequitur,* as most people did who hated to employ their brains, assuming a collector's mind to be beyond the grasp of the common man. But Le Chat was not of this breed.

"You like to sit in them?"

"Not at all," said Talbot.

"Ah?" Le Chat tucked his chin behind a rope-muscled shoulder and peered at Talbot with quizzical brightness. Talbot read his suspicion: the bearded *blanc* was playing with him. Rather than be caught in an unnecessary ego-conflict, Talbot decided to explain.

"The fact is that chairs are unnatural to the human shape. Consider the awkwardness, the discomfort of balancing one's torso on the lower end of the spine. Not to mention the damage caused by cramping the lower intestinal tract: constipation, colitis, hemorrhoids, sciatica. Many so-called diseases of the civilized man are the result of spending one-third of our lifetimes in a position which nature never intended for us. Where, then, did the chair originate?"

Le Chat's broad forehead creased into three separate folds, whether from the effort of steering the boat into the inlet or pondering his question, Talbot couldn't tell. He continued:

"In trying to find the answer, I've noticed that chairs generally become introduced to primitive cultures as a symbol of power. The Egyptians always pictured their gods, and their god-emperors,

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seated on thrones, but never the common people. Democracies have eliminated the throne, but we still have chairmen. Congresses and parliaments sit in session; persons seeking power run for office or stand for election; those who win are seated. Legislators rise to address the chair, not the man. Capitols are called the seat of the government, despite the fact that the word originated in the latin *capus*, meaning head...."

Talbot broke off as the island began to offer passive resistance to their landing. Streamers of spray climbed halfway up the cliff and fell backwards, drenching the two men in the short-keeled wooden boat. Le Chat steered the bow to a narrow beach of black stones, which gnashed at Talbot's boots when he jumped ashore. Le Chat led the way up the steps which had been hacked out of the basalt cliff. At the top, while Talbot waited for his heart to cease thumping, Le Chat explained that the island's first owner — after the Caribs quit using it for cannibal feasts — had been a wealthy French brewer. He'd built a chateau at the summit and died without visiting it. His sole heir was a nephew who spent the entire fortune before he reached thirty — except for this minute clod of a rock in the Caribbean. He was the only one who'd ever spent any time on the island.

"What about the natives?" asked Talbot as they climbed toward the central peak.

"During the day they come over to gather wood and shoot the wild goat, sometimes to pick coconut and mango and breadfruit. But none spend the night here."

Superstition? Talbot no longer renounced superstition. He had discovered logic to be an explanation of things only in its own terms, and science a process of naming and subdividing the unknown until faith collapsed under the sheer weight of nomenclature.

With his bare toes, Le Chat climbed the chain-link fence surrounding the estate, then stepped out on the three incurving strands of barbed wire and dropped to the ground. Talbot had to take off his boots to follow, then tugged them on again to negotiate the coral pathway leading up to the mansion. Once again they entered as burglars, this time by climbing an ancient guava tree which grew alongside the stucco wall, lowering themselves onto the red-tiled roof, and dropping a breathless ten feet into the courtyard below.

Talbot turned slowly, gazing around in wonder. Four simple rooms surrounded a square central patio composed of green and white stones set in a spiral pattern. Talbot wished he had been a geologist, for he had never seen

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such stones. They had the depth and richness of jade, but with the appearance of soft plastic. He took off his boots and walked toward the chair in the center. He expected the stones to be hot under the late-afternoon sun, but they were cool and soothing to his bare soles.

The chair itself was an object of serpentine grace. Each joint flowed into the other with no interruption of line or grain. It had the rich color of cherry, protected by a polish which defied the efforts of Talbot's case knife to penetrate to its true consistency. The blade kept sliding as though on an oily surface, and the knurled spirals of innumerable cat's-eyes taunted him from behind the gleaming finish. Talbot snapped shut his knife and turned to Le Chat.

"What happened to the nephew?"

"Died."

A responsive enough answer, thought Talbot, but disappointing in that it failed to distinguish the chair owner from the possessor of a fishing smack or a Stradivarius violin. "Nothing unusual in the manner of his death, I suppose?" said Talbot, wondering, even hoping that the nephew had chosen to die while seated in this chair of chairs....

But no. Le Chat reported that the nephew had succumbed to a heart attack in a Biarritz hotel at the age of fifty-six, accompanied by a girl of the streets who had been entertaining him — an honest girl, it seemed, since she'd left sufficient money in his wallet to provide for his burial. The nephew himself was without issue, in fact without wife, best friend or intimates anywhere in this world. A sad ending indeed, if one granted the existence of a wife and children to be the epitome of bliss, which Talbot did not. His observations had too often revealed that bliss, happiness and satisfaction are independent of outward effects. Even to think of being happy, not to mention searching for happiness, is sufficient to destroy any mild satisfaction one has found in life. The important thing was commitment, whether to a person, an ideal or a horse-dropping gilded and enshrined on the mantel made no difference, for in the finite world all things were equal.

None of these ruminations did Talbot reveal to Le Chat as they stood regarding the chair, not looking at it as much as using it as a focus for their eyes to avoid looking at each other. "So who owns it now?" The question had barely cleared Talbot's lips when the answer dropped into his mind. "The government, of course."

Le Chat nodded. "You wish to buy the island, I think they will sell."

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"I'm only interested in the chair," said Talbot, and both men resumed looking at it, as though expecting it to come forward and offer some kind of proposal. It merely sat there with gleaming arms outspread like a woman who has stated her terms (total surrender) and awaits the man's decision.

Le Chat cleared his throat. "They have not counted the things since he died. If you take it, nobody will know."

Talbot felt a flash of moral revulsion. It was more than theft, it was desecration. But the smile on the black man's face hinted at a joke, and when Talbot tried to shift the chair he felt a solidity rooted to the earth. Going down on his hands and knees, he noted that the stones of the patio had been set around the legs with a superb craftsmanship that left no discernible seam. He tried to insert his knife blade between the chair and the stone, but the point slipped sideways. He gripped the handle firmly and struck it with the heel of his hand; the knife skittered sideways and spun across the patio. Talbot gave up the idea of taking the chair; it would have to be dealt with *in situ*. And what did one do with a chair?

Talbot sat.

The feeling struck him, not like a lightning bolt, but rather like a mist which condensed inside him. Like sin, it seduced him first with sensations of pleasure which gradually intensified to the point of pain. Talbot writhed inside and was about to thrust himself out of the chair when he saw Le Chat smiling at him.

"Nothing will happen now. M'sieur Chantille him sitting all night, come daylight I fetch him."

Apparently there had been no overt evidence of his inner torment. The fact calmed Talbot, though he could not forget the feeling that he'd been approaching death or something similar....

"Chantille ... the nephew? What did he do — after sitting?"

Le Chat strolled to the marble bench and sat down, taking a stained cigaret from behind his ear. "He flying off to Amsterdam. He send postcard from Paris, Acapulco, Switzerland, Bermuda—" Le Chat counted them off on his outspread fingers, as though the number of areas where an individual might go should attain to the mystical number of five. "—New York. He return broke each year, this same night in September, when no moon shines."

"How do you know he was broke?"

"Once he stow away on a cable ship. Another time work his way back on a banana boat."

"But he leaves again with money?"

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"Money, no. I lend. He sending it back, *tou' suite.*"

"But he always dissipated after he sat in the chair?"

"Eh?"

"Pressed the women's flesh, drank the good wine."

"Ah, *oui.* But without the laughing, the *joie.*"

Talbot sat thinking. Chantille had obviously used the chair to support his extravagant scale of living. Figure that a man of his tastes, having formed his life pattern under the indulgent eye of a rich uncle, would need a hundred thousand a year to avoid the pinch of penury. Though Talbot's hopes did not take the shape of money, Chantille's success proved that the chair conveyed an awesome power. The payoff must have been in the form of some easily redeemable object, since Chantille always failed to set aside the means for his return; no doubt he was something of a boob....

In fact, Talbot was beginning to feel like one himself. When he was a child, his grandmother had made him sit on a chair with a removable container under the seat. Le Chat was watching him now as his grandmother had done, and Talbot felt the same annoying compulsion to produce ... something.

"You can go not if you like," said Talbot. "Fetch me in the morning."

No sooner was it said than Le Chat was gone, shinnying up a pillar and swinging himself onto the roof. Talbot felt weak from the strain of suppressing his inner turmoil. He closed his eyes and was immediately swamped in a dream of crystalline spheres and jagged surfaces. He awoke and tried to recall it, but the frame of reference was too alien. He felt sure of only one thing — his own brain could never have produced such visions.

The sinking sun threw purple shadows over the patio; goose pimples prickled his arms, and he felt an urge to catch Le Chat before he was stranded on the dark brooding island. Then he thought: Where Chantille succeeded, Talbot will not fail. Still, perhaps an unimaginative clod like Chantille could absorb forces that would unhinge a sensitive brain like his own....

Gradually the shadows lost their identity. Fireflies began cutting dotted lines throughout the perfumed night. Talbot listened to the muttering grumble of stones on the distant beach; his brain became a taut shimmering pool awaiting the splash of a frog. He sensed a hovering presence, like a blanket about to drop over his head. The fireflies became semaphores blinking on and off, signaling his presence to the Watchers. Who were they? Talbot didn't know, but

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he felt them in the silence of his mind.

The sound of the surf ended suddenly, as though a barrier had dropped between him and the sea. Even the fireflies ceased their motion ... or was it time that stood still? Instead of blurred darts of light, he saw a dark fabric with holes opening into a region of unbearable radiance. Through the holes wriggled a half-dozen wraiths of pearly light, transparent eel-shapes which tumbled through and swam around him. They flew at his head until he blinked and jerked back; then they slipped aside ... laughing? He heard no sound, but felt their emotional tail-flicks of amusement. The larger ones would fly like arrows at his eyes, then wheel and swoop in from another direction. The smaller ones seemed to hold back, then dash forward in the wake of their ... elders?

As time passed they ceased to attack him personally and began to treat him as a focal point for their swooping sorties into the black sky. He counted them each time they returned, knowing neither why he counted them or what he would do if their number should dwindle. There were exactly six, with sizes ranging from the length of a yardstick to that of the ballpoint pen in his pocket. Suddenly there were five. He had a flash of panic, then turned his head and saw the sixth — and smallest, — hovering behind the chair. He reached back and felt warmth bathe his fingers as it fluttered away. He rested his hands on the arms of the chair and

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watched the others ... play? Of course, that was the only explanation for their aimless undirected activity. They were the Elvins of the upper world, and he was ...

The Sitter.

He felt warmth on his stomach. He looked down and discerned a glowing presence on his lap. He touched it and felt a pulsation, a rhythm which could have been breathing. His fingers traced the configuration of invisible wings, touched flesh as smooth as talc-covered ivory. A scent rose to his nose like a compound of honey and spices. He felt his heart melt with tenderness, while his chest swelled with pride. A warm protectiveness flowed out from him to encompass the figures as they stopped moving and grew quiescent around the chair. He had no illusions about his power. He was a spaniel to be poked and teased ... and depended upon.

He did not close his eyes until dawn pinked the eastern sky ... and then only because the radiance swelled up around him with an intensity he could not bear. When he opened his eyes, the little creatures had gone, and a faceted stone glittered on the patio in front of him, a diamond greater than the Star of India and the Kohinoor combined. He took it in his hand and understood why Chantille had led a life of aimless debauchery. And what pleasure could *he* buy in this world, after holding in his lap a child of the gods?

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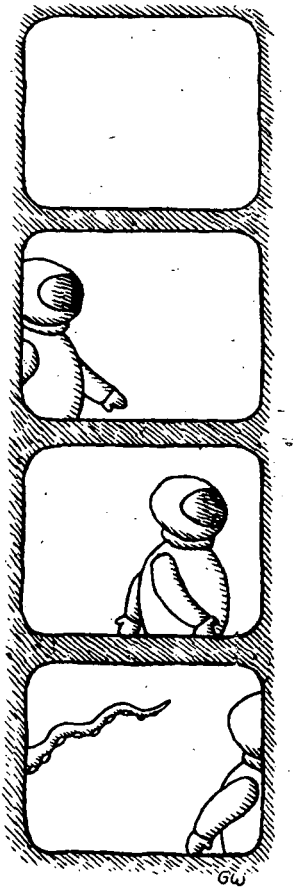
THE GREENWOOD AT SUNSET

Myth and legend is the very stuff of contemporary fantasy, not just in a progenitive sense, but as a source to be continually remined. When I heard that Richard Lester (*Help!*) was directing and James Goldman (*The Lion in Winter*) was writing a film called *Robin and Marian,* I wondered how this enduring Anglo Saxon myth would be handled. Would it be the medieval fairy tale of Howard Pyle? Would it have the manic, comic strip hilarity of *Help!?* Or the sophisticated, anachronistic approach to history of *The Lion?*

None of these, really. It is a sad and wistful anti-myth. Robin Hood, after the mess with the usurpation of John, has gone back to the Crusades with Richard Lionheart and stayed with him in the wars in France. Richard is finally killed, and Robin and Little John, who had accompanied him, return after many years to England and Sherwood. It has the same sheriff; they find Tuck and Will making a dishonest living; Marian is the abbess of a local convent ("Lovely girl. I haven't thought of her in years," says Robin). John is now king, and by an odd chain of circumstances, they all find themselves back in the very situation of their youth — Robin and his Merrie

BAIRD SEARLES

Films



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Men against the Sheriff and John — but they are all older and sadder. but not wiser, with the possible exception of Marian. ("I can't keep on doing this," says a Merrie Man as he scrambles creakily up a tree.)

Though there are action sequences, the film is primarily introspective, leading to a downbeat and surprising — though logical, in context - ending.

In a sense, it is "realistic." This is no MGM medieval never-never-land. The squalor and mud and sadness are there. But in a curious way, it is fantasy, or more correctly, a fantasia on a theme: the death of heroism. It is a myth for our time, less cynical than sad. For we, too, are living in a twilight age, I think; it's simply not a very tranquil twilight.

Late-late-show-dept...Very late one night recently I fell over something on the tube that surprised me; if I *had* known about it in the past, I'd totally forgotten it. It was a movie called *Weird Woman* (1944) which had not shown in my area for quite a long time, and after watching for about 5 minutes (I came in late), I realized I was seeing an earlier screen version of Fritz Leiber's *Conjure Wife;* earlier, that is, than the justifiably well-regarded *Burn, Witch, Burn* of 1961.

As I say, if I had known there was an earlier version, it had slipped my mind totally, and the contrast between the two is interesting. The later version quite successfully captures the essence of Leiber's brilliant novel that concern the use of witchcraft among contemporary, civilized Americans (in this case, the faculty wives of a small university). The horror lies in the very mundanity of the setting, and Leiber was among the first to bring off this device, long before *Rosemary's Baby* or *The Exorcist.*

Weird Woman, however, fudges every interesting point in typically '40s, B movie fashion. The ordinary, young wife is now an exotic type brought up in Polynesia by the natives to believe in witchcraft, and the prime villainess is a lady anthropologist who is using her knowledge of the subject to do in our susceptible heroine by the power of suggestion — yawn.

Most ludicrous of all is the casting of Lon Chaney, Jr. as the beset professor. Somehow, Larry Talbot as young Dr. Saylor just doesn't come off.

Another late night discovery is that *The Green Slime* is not a bad movie. Somehow, we were all so put off by its tacky initial advertising campaign that we didn't notice that it was well produced and, while not exactly intellectual, not unworthy of its tradition of BEMs, square jawed heroes, and beauteous female doctors.

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It also interested me to see how it paralleled that greatest of all s/f-horror films, *The Thing*. Substitute a space station for the Arctic research station for the claustophobic effect, throw in a squad of tentacle waving beasties of vegetable origin for a less subtle menace than the single horror of the older film, and even give it the same moral conflict: the doctor who wants to make contact against the square jaw who says "shoot first and talk afterwards." *Voila*, an updated space age version.

Unfortunately, the thingies, while visually convincing, come off for me as more appealing than menacing, no matter how many people you see them electrocute. There's something about their querulous whine, their idiotically determined forward movement, and their hysterically waving tentacles that brings forth giggles rather than screams.

Things-to-come-dept... At last, something to really look forward to! I got a preview of a film this month that will probably only be going into production just before this sees print. What do I mean by a preview, then? The gist of the script accompanied by a series of conceptual paintings which included sets, costumes, characters, and hardware; if it only half lives up to the promise shown, it will be *the* s/f film of the 1970s.

What really gives me the confidence to come on this strong this far in advance is that it is written and produced by George Lucas, who is best known for *American Graffiti*, but who made an indelible impression on me with *THX-1138*, a film short on concepts but very, very long on style.

Lucas, like most great filmmakers, is not about to repeat himself; *Star Wars* — the upcoming film — is very, very long on concept. He obviously knows his science fiction: the script kept reminding me (in the best sense) of Heinlein, Herbert, Bradley, and above all, E. E. Smith given a contemporary sensibility. There is a totaliarian Galactic Empire; there are rebel planets, aliens, robots, battles in space, a superpowerful elite, laser swords, wizards, and just about everything you always wanted to see on screen but knew nobody would put there.

Perhaps the best clue to its science fictional sophistication is the fact that the film has nothing to do with Earth. Even in *Forbidden Planet*, the best example of this kind of thing to hit the screen so far, the ship comes from Earth; *Star Wars* is well beyond that.

Ballantine will release the novelization in the fall. Then all we do is keep our fingers crossed that it will be realized on screen.

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Here is a story that blends the best qualities of traditional sf (carefully extrapolated future technology, big concepts, suspenseful problem-solving) with the good prose and complex and interesting characters we've come to expect in more contemporary sf. It is complete in itself but will form part of a novel, IF THE STARS ARE GODS, to be published in Spring 1977.

The Anvil of Jove

by GREGORY BENFORD and GORDON EKLUND

I

There is a story about two friends, who were classmates in high school, talking about their jobs. One of them became a statistician and was working on population trends. He showed a reprint to his former classmate. The reprint started, as usual, with the Gaussian distribution, and the statistician explained to his former classmate the meaning of the symbols for the actual population, and so on. His classmate was a bit incredulous and was not quite sure whether the statistician was pulling his leg. "How can you know that?" was his query. "And what is this symbol here?" "Oh," said the statistician, "this is pi." "And what is that?" "The ratio of the circumference of the circle to its diameter." "Well, now you are pushing your joke too far," said the classmate, "surely the population has nothing to do with the circumference of the circle."

—Eugene P. Wigner
Symmetries and Reflections

She hung suspended in the void of space, dangling from the umbilical of the airhose, floating like an embryo contemplating the feasibility of birth.

Inside the bubble of her helmet the sharp, singsong voice of Bradley Reynolds pierced her careful serenity: "I don't mean later, Mara. I mean now. You know damn well you're violating every regulation written. Particularly working alone in an outer bay."

She did not intend to let him ruin it — not quite yet. She answered distantly, "Who wrote these regulations, Bradley? Not thee, not me, not—"

"But we have to follow them."

"Thee, perhaps." She giggled sharply, knowing that would irritate him. "But not me. I follow a higher law."

"Your own."

"So?"

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He went on but she ignored him. Tugging at her mooring line, she rotated back toward Jupiter. What a grand and glorious sight this was. Mara could no more hope to turn her eyes than she could have ignored the visage of God standing at her elbow. Wasn't Jupiter a god in its own good right? — a massive oblate sphere blotting out an improbable chunk of black sky. The atmospheric belts churned slowly, blending orange and pink, splotches of white at their boundaries. The Great Red Spot crept past the limb at the western edge of the South Tropical Zone, but the most remarkable sight lay between two equatorial belts, where they merged in a solid yellow band, speckled occasionally with misty white spots. An acquaintance on the Orb, a dull astronomer, had pointed out this sight to her. An extraordinary event, he'd claimed, yet what on this remarkable globe was not at least improbable? She would have liked to float out here forever, watching the giant planet swirling through its ten-hour day, strange features blending and flowing beneath her eyes. Not normally a mystic, Mara reminded herself that her universe was one populated with firm and certain objects; Bradley and the Christers fretted about the unseen and unknown. But Jupiter? Here the boundaries blurred, the categories shattered. They knew so little—

"Mara, please." Bradley again, a flinty edge to his voice. "I won't accept responsibility. If you don't care for yourself, then respect the equipment. If that shuttle gets loose, it could prang itself sliding out across the top of the Orb."

She detected a note of bemused detachment in his voice. Whatever bothered Bradley? He seemed like an actor only gingerly involved in the role of his life. Yet she answered him seriously. "It's berthed with elastic lines on retrieval coils. I'll be back soon."

"No." His tone remained dry and even. "I'll come out and drag you back myself."

"Bradley, your heart."

"I'm coming."

"You're threatening."

"So?" She swore she heard a distant chuckle. "I'm not bluffing."

If he was — and she thought so — he provided no means for detecting that. "All right. Damn you, Bradley. I'll come." "Then hurry." He wasn't triumphant.

"I will." She saw no reason why these petty rules included her. Since she wasn't a member of the orbital crew, she regarded herself as a free person. Bradley Reynolds? Commander or not, she owed him no allegiance. There was nothing to fear out here. No gigantic monster came swimming past to gobble her

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up in great foaming jaws. She had come to Jupiter to live free from the asylum of Earth. If she died, so what? One human life gone from four billion. Even among the five hundred denizens of the Orb, her life could not be counted a significant factor.

She drifted idly. The Orb — that was a stupid name. It wasn't a sphere, it was a tin can, a lazy spinning cylinder. A few hundred meters above her head — she glanced up — was the pancake of storage water which blocked the sleeting high-energy protons from the Van Allen belt. Orb came from orbit. A dumb way to pick a name—

"Mara. You're stalling."

"No. I said I was coming."

"Then —" he was deliberately patient "—let's come."

"I was thinking." She calculated the distance downward to the Orb's spinning top. Her shuttle was in berth six, which just now was a full diameter away across the Orb. Reaching it was much like catching a horse on a merry-go-round, only she couldn't run alongside and match velocity. It was too difficult to turn in a circular arc using attitude jets alone; she had to jet downward toward the Orb and intercept it just as berth six passed. If she missed, there were handholds to clasp for crawling. She gauged the times and distance with some relish; it made an interesting calculation, fun. Better than zero-gee squash.

"Keep my supper hot," she told Bradley. "Your lost little girl is coming home."

Giving the jets a burst, she coasted toward the gray metal top of the Orb. Berth six slid along, and when she was sure she had it right, she flipped over, pointing her feet toward the deck. Impact was satisfying; she missed the berth by only a few meters. She went hand-over-hand to the edge of the berth, then glanced downward at the shuttle moored securely in its slot. Swinging over the edge, she looked around for the airhose connection. Her suit air was okay; it had a metallic oily taste that bit her throat. Spotting the hose on the other side of the berth, she leaped deftly across.

Zero-gee maneuvering was fun, a challenge, using eyes set in a line parallel to the ground to negotiate three dimensions. It was necessary to keep in mind that up and down were no less essential than sideways. This world was a larger one, somehow more real.

She snagged the hose and made the transfer to ship's air. But she wasn't quite ready to quit. No, before going in, she wanted one more look at the giant planet. She cursed Bradley for shattering her peace. She felt restless; her throat

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was scratchy; her period was due in three days. On impulse, she kicked upward, drifting suddenly free from the berth. The Red Spot loomed larger now, like an open sore before the scab forms. The sight made her feel instantly better, free again. She drew her knees up as far as her skinsuit would allow and turned a free space tumble. She laughed aloud. What about Bradley? She could hear him whining now. What could she do to please him? The possibilities were enormous. Sing a little song, perhaps a tap dance in zero-gee. Or maybe she should simply thumb her nose at him, then do a pratfall. Or she could—

Something tugged at her, then gave way.

She vectored to the left. A push had—

The airhose. She understood now: it had snapped.

Which meant — quite simply — that she was dead.

Her ears popped. She automatically reached behind and snatched at the wildly flopping hose. She caught it with one hand and pinched it closed. She tried a tentative breath. Nothing. Her lungs refused to expand.

She thumbed on her attitude jets. Taking a quick sighting on berth six, she fired. The Orb swam up fast, too fast. She began a turn to land, trying to maneuver with one hand while holding the hose with the other. I am dead, she suddenly reminded herself. She landed on one foot, slamming the deckplates. A flash of pain burned her leg. She spun away, glancing off the shuttle's bumper, and smacked into another face of the berth. A rushing, roaring sound swept through her head. Am I dead now? she wondered.

Where was her suit bottle? She had forgotten to put it into its deck clasp and now, as she glanced frantically around, it was nowhere to be seen.

Bradley shouted incoherently in her numb ears. If she heard him, she guessed that meant she must not be dead. He would be seeing it all on video. She was providing a show after all: the severed hose flapping, snarling on itself; the girl clumsily ricocheting around the berth —

The air bottle was gone. She cleared her thoughts, struggling. That left only the hose. She couldn't snag the end of it. The hose whipped around like an enraged snake. She searched for the cutting laser. It was on another face of the berth, moored securely. She kicked across and spun over to take the impact on her back. The laser was a small precise instrument she could operate with one hand. Snatching it out of its clip, she thumbed it to operational mode. Her ears throbbed with

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pain. Lightly, she moaned.

Now, the hose. Again, she kicked, drifting languidly for the airhose socket where it joined to the Orb. The hose snapped and lashed. She ignored it. The roaring in her ears pounded like great waves in a storm. Her chest was burning inside. The world moved with a warm lazy slowness. Now there was time for everything. The job, another look at the dancing pink bands of Jupiter, more.

With an effort of will she snatched at the airhose and brought the cutting laser next to its socket. She pressed down. A thin yellow bolt shot out, slicing the hose. The amputated hose blew away in a gust of air. She could see the gas; it made the running lights ripple. So strange — a supposedly invisible gas. Purple flecks brushed the corners of both eyes, forming crazy, almost intelligible patterns. She tried to concentrate upon the colors but...

No. She pulled the hose around from the back of her helmet and sliced it off at arm's length. She threw herself forward, jamming the stub of her helmet hose against the socket extending from the hull, fighting to force it into the hole, battling the stream of air. There was a reason for doing this. It was important. Something from far, far back in time. It—

Her ears popped. The purple darkness thinned, blew away. She held the hose on the socket with both hands and breathed in quick short gasps. She drifted, anchored to the hose socket.

As soon as she could, she told Bradley to shut up. "I'm all right. Can't you see that? Now — please — get somebody out here. Save me."

Bradley Reynolds fervently believed he was in the wrong place. He had been to the moon and from there to Mars and then back to the moon again. He had married five times, known countless lovers, acquired many friends and at least three professions. But that was over. The active life had lost its zip, its zing. He had retired.

And now he was here: on an artificial satellite, a tin can orbiting Jupiter. At 127 years of age. No, he thought, it just wasn't right. If any man needed to mull over his private concerns in the peace of the monastery, then that man was Bradley Reynolds.

As time went on, he became more convinced that Tolstoy was correct: events made the man, not the reverse. Bradley was not a maker of history; he was an unwilling passenger on the river of time. His only conscious choice had been to float, not sink. Then he had strained to reach the other shore.

He looked at his office. Thin

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pine paneling. Lightweight wooden desk. Three-D of the surf crashing in Baja. There was never any silence here. The low hum of machines was a constant force; his thoughts never ran to completion; interruption came incessantly.

A Tunisian monastery. The silence of the desert. He had retired there, ignoring the world. Never reading a newspaper, he had learned all at once of the giant antennas eavesdropping on the nearby stars. A respresentative from the United Congress had appeared one day at the monastary in a blue haze of gasoline smoke. Casting worried sidelong glances at the silent monks who hovered nearby, the man had told Bradley of the Alpha Libra signal, shown him the Puzzle. Baffled, Bradley shrugged. The man refused to accept that as a final answer.

They wanted his testimony, his support, his weight. Bradley Reynolds was a legend alive, a creature from another time, a spaceman. An oddity. No one knew that to the older Bradley it was exactly the same: that the younger Bradley, seen dimly through a cluttered string of pale memories, like yellowed photographs, was a strange and distant piece of tattered history. Bradley could understand some of the things that younger man had done, but he could not slide smoothly into that firm body or experience the same light, springing thoughts. His eyelids now were purplish and wrinkled, his nose fleshy; his skin had acquired an odd olive cast. We are more than passengers inside the hull of a body, he thought. The flesh shapes us, spins us about, points us in whatever direction the corpuscles, arteries and glands dictate. The fact that the course plotted by his body had changed in time did not seem to Bradley a pointful, significant fact. The mind within learned, forgot, sifted among details and memories without ever knowing how the body — always silent, always supreme — had weighed them before bringing these things to consciousness. The mind suffered illusions; the body, none.

Or so he had once realized. In Tunisia, that day of the man's visit. Bradley spent many hours gazing downward at his own naked forearms, gnarled as ancient elm, trying to follow a wavering chain of thought. Despite the hard black stone beneath his buttocks, the world seemed to melt; the air rippled with half-seen activity. Things repeat, return, he thought — things and people and ideas form and reform, unravel and then curl up again, swirl into circles, return endlessly. One should not be afraid to return to past ideas. All things are properly without limit.

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Exploration remains an endless task. But Bradley did not feel this could be all; there was some thrusting point to events, some direction in time and human life. He did not believe man was merely an animated mustard seed, born to grow and die and endlessly stamp out another image of itself. Biology's idiot repetition could not serve as a symbol for mankind. There had to be a vector.

For long hours he sat in the shadowed cold room as winter rain spattered the walkway outside. Angry dark clouds boiled up from the horizon, while restless birds twittered and called. He felt awash, drowning in the sweet, heavy air of Africa.

Then something budged him. Had it come from within or without, the mind or the body? He went before the United Congress, swore that the effort to understand the Puzzle was necessary, essential. And since the few elements of the Puzzle so far understood focused upon a massive planet, Jupiter should form the nexus of any serious study.

His desk buzzed softly. "Ah, sir Mara wants to see you. She's coming up from—"

"Delay her a moment, will you?"

Bradley frowned at the green and yellow rendering of the puzzle mounted on his wall. Again, he wondered if the fragile chain of logic was right.

The thing started with irritating simplicity. It was just like a textbook example: a transmission of simple on and off dots, numbering 29 times 53. It couldn't be an accident; 29 and 53 were primes, and so the natural impulse was to break it down into a 29 by 53 grid. It made a picture.

A large blotch in the upper right-hand side was probably a star, because below it lay a string of seven planets. The three innermost were the smallest blotches; so probably they were terrestrial-sized planets. The outer four seemed to be Jovian class. The fourth and largest planet had a line extending out to the left, arcing into a semicircle that embraced the rest of the message — all indecipherable.

They thought they knew what the squiggle meant: whoever sent the message resided on that Jovian-type planet. No other way of breaking down the message made any sense. So the logic seemed right.

Thus, the Orb. Understand life on Jupiter and crack the alien message.

A sound enough idea. But as yet no one had found any life in those clouds, or seen how any hypothetical beings in such a churning atmosphere might ever build a radio.

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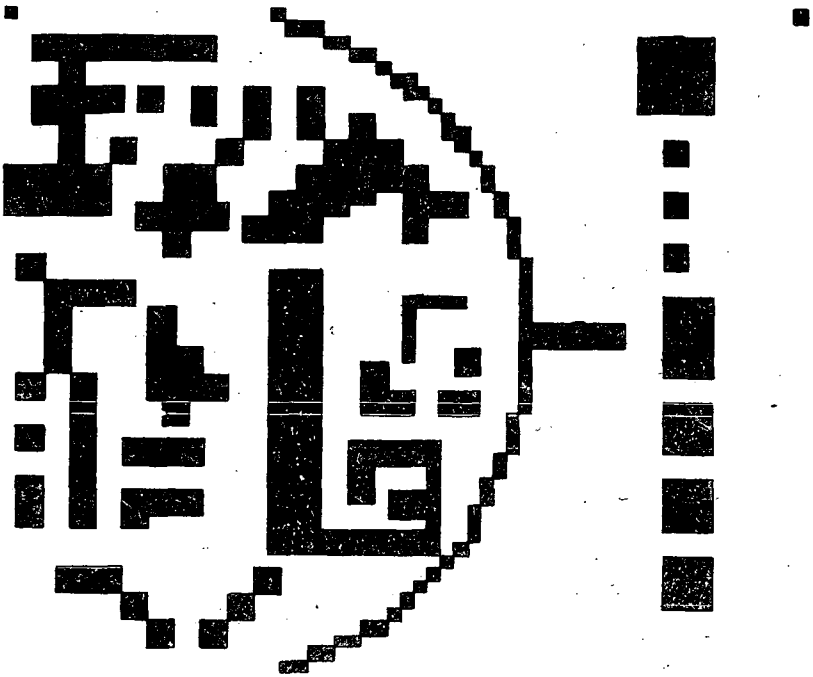

A radio broadcast it was, though. It waxed and waned with a 16.3-hour cycle, presumably as their planet turned. A localized source on the surface, then. There was a slight Doppler shift in the frequency, with period 15.74 years. A reasonable phenomenon: as their planet performed its own Newtonian waltz about its star, it moved progressively toward and then away from us along its orbit.

Given our knowledge of stellar spectra, and the finely observed luminosity of Alpha Libra, the astrophysicists could guess pretty nearly Alpha Libra's mass. Applying Kepler's Laws to the unseen planetary orbit, it turned out that the radio source was about 7.2 Astronomical Units out from the star — just about right for a gas-giant type planet, like Jupiter or Saturn.

All this, without ever deciphering the signal.

Which proved impossible.

So now he was the elected Commander of the Orb, dispatching atmospheric probes, scrutinizing the larger moons. And playing housekeeper to a mad genius, he

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reminded himself, as his office door popped suddenly open.

"Bradley, you—"

"Sit down, Mara."

She shook her head, refusing, as always, to sit.

Mara was damn pretty: the quality of genetic tampering necessary to produce her would hardly have been satisfied with an ugly wart of a girl. But, he sometimes thought, perhaps that was their key mistake, as well. She was too perfect. A hint of ugliness, a sagging lip or crooked chin, might have taken some of the edge off her.

"This room is incredible," she said, waving at his many artifacts. It was a subject she never hesitated to bring up; it had become almost a ritual between them. Approaching the desk, she fingered a statue of Krishna, caressing the metal. "Buddha on a bad day?" she asked, smiling quizzically.

"You know damn well." Elsewhere in the room, the Buddha frequently appeared; on the wall above his head dangled a silver crucifix.

"I asked because I thought that's what you were, some kind of Buddhist."

"I'm a man. Any possible answer interests me."

"But what about the question?"

"That interests me, too."

"Not me." She shook her head, let the statue drop back into place in the low-gee field, and turned away to gaze at the bookshelves directly behind as if trying to choose a title. She snickered at several volumes. He wondered if she would now proceed to chide him for reading fiction when there were so many facts — she would name several as examples — of which he remained ignorant.

Instead, she turned without a word. "Somebody tried to kill me."

He let a silent moment drift past, concealing his lack of surprise. "You're sure?"

"I don't make mistakes. Before I came back, I tried cutting that airhose twice myself. It's not exactly made of paper. I recovered the severed portion. It was extruded, as though somebody had weakened it."

"You can't fly around and stretch it indefinitely, you know."

"Sure. But I say I wasn't pulling it that far out of equilibrium. Somebody rigged that hose on purpose." She pointed a demanding finger. "And I want you to find out who."

He couldn't help laughing. "I could name five hundred suspects to start with. If we eliminate me and you and perhaps Corey, that still leaves plenty. Do you want me to arrest the remainder? I imagine most have motives — good ones, too, Mara."

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She suddenly frowned, self-absorbed. "All of them? It's not just a stray Christer or two?"

Bradley decided to be kind. "You must understand that most people in the Orb are research scientists. Quite a few are prima donnas themselves. It's an occupational hazard."

"And they don't like smart-ass kids, even with my credentials."

"You don't make it easy. In fact —" he kept his voice deliberately calm "—I ought to ground you for that stupid stunt, put you on permanent hydroponic duty. Everyone else works in the garden. Why are you our miraculous exception?"

"Because I'm different. Try that on me and I'll quit dead. I came here to be excited, thrilled, not to scrub tubs."

All Bradley could manage was a pained headshake. "But I can't have one set of rules for you, another for everyone else."

She laughed. "Why not? That's what I was told in nippy grade school. It was bullshit then; it's bullshit now."

"Nippy?"

"That's me. Nippy for people who have been nipped, manipulated, genetically tampered with."

"You still shouldn't have gone out there," he said.

She shook her head. "No. I wanted to see Jupiter — directly. I spent most of my life walled up with computer teachers and books and biodapts peering at me. If I wanted more of that, I'd have stayed on Earth."

As he started to reply, his desk monitor beeped. He flipped a switch, not without some degree of relief, and behind Mara doors opened: pterodactyl wings.

A man poked his head through the doorway. "Meeting's already started, Bradley."

Mara deliberately removed the six-inch black cigar from her hip pocket and carefully stripped the plastic wrapping paper. Done, she crumpled that into a ball and tossed it aimlessly past a shoulder. Then, taking the cigar in both hands, she laid it lengthways between her lips and delicately moistened the outer leaf of tobacco from end to end. Slowly she thrust the tip into her mouth, bit off the point and spit that out on the floor.

Then she lit a match.

At last Tom Rawlins reacted. "Bradley, I protest. Can't we at least keep the air in here clean?" Next to Bradley, Mara most enjoyed testing Rawlins. He was a fat pompous man more or less in charge of the recovery booster systems. Once or twice he had actuallly seemed to know what he was doing.

She puffed on her cigar, stifling a cough. "I want to relax."

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"And poison the entire Orb," Rawlins said.

"Prove it." Mara flicked an ash.

"What?"

"I said prove it. Poison the entire Orb — then show me how."

"But I couldn't — I just can't —"

"I can." Mara quickly laid the calculation out for him— Orb air volume, cycle rate, average human exhalation, flow within the meeting room. "Even if all of us were smoking, nobody would get poisoned." She blew a thick cloud of blue-gray smoke in Rawlins's direction.

He turned beet red, not a pretty shade. Bradley rushed into the breach. "Now, Tom, we all know how she is. Allow her some eccentricities. We'll survive."

"Suffocated," said Rawlins.

Mara repeated her concluding figure, then let loose a second smokescreen.

Everyone was present: a dozen men and herself, the lone woman. And Corey, too, whatever it was. She found it amusing that, with all the talk on Earth of final sexual equality, whenever one probed to the upper reaches of any group or profession, the faces invariably turned out to be bearded. The only likely exception was whoredom, and she thought that might be changing, too.

There were times when she wondered which irritated them most: that she was so quick, so imaginative, so young — or that she was a woman. A perfect man they might have accepted. But then, how much of this was due to her own self-consciousness, causing her to misread these men? She smiled inwardly at this subtle prick of self-knowledge; the world was subjective and even internal visions were blurred.

She spit. Even soaked in good bourbon, these cigars, three years removed from Havana, tasted like rat's piss.

"Let's take it in turn," Bradley said. "Inform us of your present progress and what, if anything, you've recently learned. When that's done, we'll try to put it together. Tom, you lead off: the booster systems." Bradley sat in the middle. In a largely futile attempt at coziness, the room had been decorated in a spiral rainbow swirl, a style now out of fashion Earthside. Still, it was a welcome contrast to the womb whiteness of most of the Orb. They met here once each Earthweek in an attempt to make sense out of their mission. For a time, Mara had ceased attending the meetings; nothing ever happened here. Only recently had the pleasure of taunting Tom Rawlins drawn her back.

Mara paid no attention to

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Rawlins's dissertation till the tone of many voices grew abruptly animated. She listened to a few lines.

"A good engineer ought to know better than to mess with a glassblower's tools."

"He had to get the job done!"

"Look, the nitrogen trap had to be double insulated."

But it was nothing. Mara wrote off the sudden electricity to the gradually increasing barometric pressure. Odd, she thought, the others couldn't sense it. They were such sensitive animals, reacting to the slightest change in pressure, but they had no direct perception of it. The Orb pressure varied through the workday, to promote productivity: a mood music of the atmosphere.

"Any new ideas?" Bradley enquired.

Arthur Vance, a linguistics expert, had one, but before he'd spoken more than a dozen words, Mara had taken his idea, comprehended it, analyzed it, and rejected it as not only invalid but also misleading, a dead end. Still, Vance talked on. Her mind wandered.

Puffing on her cigar, she stood up, making no effort to conceal her distracting motion, and went to where Corey, in its box, sat on the floor. More than one well-meaning soul had mistaken Corey for a piece of furniture — a four-by-four steel box resting on a pair of wide wheels, with an assortment of tack-ins and sensors extending from its top and sides. An animated safebox. A blank television console. But Corey was the only other manip aboard, her brother — or sister.

"I intended to come see you today," Mara told the box. Her voice sounded deliberately loud. Vance continued talking, outlining a syntactical strategy. "I ran into some trouble outside."

A pair of lights flashed on top of the steel box. The voice murmured, like the purr of a happy cat. "They tell me you almost died."

"An accident." She shrugged.

"But some tell me the line was severed on purpose."

"Wishful thinking maybe. Why would anyone do that?"

"They dislike you, Mara. This cramped Orb breeds much hostility. You are too good for them."

"Could be." She didn't smile.

"Do you know the identity of this one person involved?"

"Not exactly. I've narrowed it to five hundred possibilities. Bradley said it wasn't him. I know it wasn't I or you. I guess it was one of the others."

"We must expose the one and—"

"Damn it!" This was Rawlins. Apparently, after Vance had finally

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finished expressing his banal idea, Rawlins had had one of this own. "If you're not interested in this, Mara, why don't you go outside and let the rest of us talk?"

She turned slowly and met his eye. "I've already analyzed Vance's idea. He wants to interpret the signal as a coded ecological scheme, based on the different layers in a Jovian-type planet's atmosphere. Okay, maybe ammonia flow rates are all these things know. But Vance has tried to blow a kernel of truth into a sort of intellectual puffed rice. It won't work. I know. I've already tried it."

"Mara," Bradley said, "at least you could let him—"

"He can blab on his own time, not mine."

"Then get out of here." Bradley spoke with a definite snap to his voice. "Right now."

"I won't—"

"Now," he said softly. "I mean it, Mara."

She glanced at Corey. A light on the side of the box flashed a quick, dancing red pattern: their private code. Without a backward glance, she turned and went through the door. The box wheeled after her.

"Idiots," she said out in the corridor. "Goddamn fools."

"Bradley was very angry."

"Or wanted to appear that way. He's a pretty fair politician when he thinks about it."

"I thought he was beyond such earthly matters. He seems a very mystical, deeply religious man."

Mara said in a singsong voice, a fair parody of Bradley, "If you can think about it without laughing, the question of existence becomes a very real one."

Corey made a noise like laughter, a dry barking rasp.

"You're getting better at that," Mara said.

"Yes, oscillating the verbal output has an oddly pleasurable effect in neural terms. It releases something."

"You've got it, then. Come on. Let's go down to your room and play chess. I'm bored."

"You'll beat me."

"Maybe not this time," she said.

I let them call me Corey but never say I am man or woman. Mara alone, she knows which but has sworn never to tell. I move my king's knight forward, leaping through space regardless of barrier, and capture her pawn. Light, airy, I fall upon the square. A contest of remorseless geometry, savoring of Euclid. It erases other memories. Born alive in this box, my first waking memory was a low whimper of some woman crying, "My God, my God, what, what—?" I understood at once — the words, that is — but their full meaning has

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escaped me forever. We place a ten-second limitation on our moves, but Mara does not require even that. I am aware that she commences each new game with the results of the last clearly ingrained in her mind. Any move I may make — whether intelligent or otherwise, rational or mad — she has taken into account. Still, we exist much in love, for we are too much the same. I go to work for my government, my existence veiled in mystery. The experiment that failed is called Corey. I work with the dolphins. Their intelligence, I am told, lies open to mine, but mostly they are stupid. Some whales seem brighter, but soon they are extinct, and who knows? Mara vaults her queen clean and swift the length of the board, swooping upon my undefended bishop. I could kiss her. No, I could not. Such tactics are not destined to be mine in life. My love melts. Eight seconds pass — and so I move. We are siblings, yes. "Check," she says, so I move. A Pascal defense. "Checkmate."

II

"Well, Jesus, Doctor Reynolds. I just don't want to do it."

"I'm afraid we haven't much choice."

Kurt Tsubata shook his head vehemently. "She doesn't know which end to hold a soldering iron. To let her go out in a shuttle—"

Bradley shook his head. "It's not a matter of 'let.' I'm afraid Mara possesses considerable leverage. We've pretty well got to go along with her."

"But it's dangerous. It's—"

"She has been practicing." Bradley saw that his attempt at reassurance had failed; poor Tsubata looked bleaker than ever. "And she has mastered at least some of the mechanics of the thing. She has a strong, agile body. She does rather well in zero-gee calisthenics."

"And she wants to work outside."

"Yes, but I'm afraid that's not the end of it, either." He lowered his voice. "She doesn't just want to work in one of the repair bays."

"Oh, *no*."

"Yes, she wants satellite maintenance. It's why I'm talking to you."

"Jesus Christ!" Tsubata appeared ready to explode.

"She does know electronics." Even to Bradley that sounded very lame.

Tsubata grimaced, struggling to recover. "I did ask for help."

"I meant to give you someone else, someone who could help. Maybe later."

"Well, these storms are coming more often now. Most of the funny stuff, the really big ones, seem to be happening near the poles. Those

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flights take longer. I'm getting worn out by them."

Bradley knew enough not to speak. Tsubata was talking himself into it. After a moment of silence, Tsubata looked up and said, "She won't go funny on me?"

"Oh, no. She may be a—" Bradley rummaged through his memory for the slang word "—manip, but she's quite emotionally stable. Odd, eccentric, yes. She's been bred and tuned for mental quickness. Dexterity. Imagination. She's not unduly unstable or she would never have been allowed our here. Most manips can't qualify for Earth orbital work, I understand."

Tsubata made a sour expression. "I still don't like it, Bradley."

"I didn't ask you to like it."

The long-distance shuttle, the *Rather Not,* had its permanent mooring in the hollow center of the Orb. A four-legged strutwork held it in place against the gently centrifugal tug so it remained fixed over a repair berth. Mara clipped onto a mooring line that ran out to the *Rather Not* and adroitly pushed off from the Orb's inner wall. Tsubata watched her movement with a critical eye. After a moment of coasting she flexed and turned so her feet pointed toward the shuttle. She squirted her jets and slowed perceptibly. As an extra fillip she unclipped from the mooring lines a few meters away and landed catlike on the tail section.

"Good enough. Don't move till I get there," Tsubata said over suit radio.

"Okay." Mara watched him swim easily across the twenty meters between them. He probably wanted her to mess up the maneuever; it would be easy to document if he had a friend watching on 3D and would make a good first entry in a file. She knew enough about organizations to guess that, if Tsubata wanted to get rid of her, he would have to build a thick folder of instances to prove incompetence.

As Tsubata moved toward her, Mara glanced around and attached her suit-tie-line to the nearest pipe. Most shuttles she had seen were different, each thrown together from cannibalized spare parts that came to hand. The *Rather Not* had a few customized pieces and the magnetic shielding coils were considerably larger, but otherwise it was like the others — all bones and no skin. The pilot couch was located at dead center of gravity in the middle, surrounded by struts, tanks, pipes, hauling collars and storage lockers, all placed to obscure as little of the view as possible. A large ion-engine was mounted behind the couch in a gray housing. It was lumpy but

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balanced; it wouldn't go into spinover if a pilot made a wrong move.

As Tsubata touched down, she glided away from him, perching on top the pilot couch backrest.

"I told you not to move." Tsubata came after her.

"You're going to have to give me more latitude than that. I know you're not exactly tingling with anticipation to see me out here, but that's the way it's got to be."

Tsubata waved a hand to dismiss the subject. "You'd rather be a hammer than a nail, eh? Huh. First, I'm going to make sure you know what every piece of equipment on this shuttle is for."

Mara had expected to know most of it, but there was a bewildering maze of detail. There were systems for fuel feed, a pipe complex regulating attitude jets, three different superconducting magnet configurations for screening against Van Allen belt particles, two overlapping electrical systems, navigation index, vector integrater, multiple communications rigs, an emergency high-gain antenna for work when the Orb and shuttle were not in line of sight, gyros, radio, hauling apparatus, repair parts, life support — all this had to be integrated so that a change in one system didn't cause a malfunction in another. In the next three hours Mara gained considerable respect for Tsubata and his work. He made it clear to her that a shuttle could not be run by the book; like most human creations, it demanded intuition, craft and a certain seat-of-the-pants shrewdness.

It wasn't until two days later that Tsubata considered her competent enough to take the *Rather Not* out on a routine flight to one of the orbiting satellites, S-106. After correcting a minor malfunction, as the shuttle returned the Orb, Tsubata told Mara: "I think you did very well today — very well indeed. I'm going to be glad to be working with you."

At these words, Mara experienced an odd emotion, one that overwhelmed her with its power to please. *Why, this is what it's like to feel proud,* she thought. *Proud of work you did with your own hands.*

Corey comes late for the dinner hour. I do not eat in the manner of ordinary flesh but receive my fat, protein, artificial elements directly through a murmuring package on my back. Corey goes to dinner hour to see, talk, listen. He is a silent monkey trapped in a box, slimy ropy things inside, sly as any hermit. I learn through observation what people are, not merely what they say. I compute their trajectories, just as I can integrate over four variables simultaneously and give

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quick, verbal readout. I have the agility computers lack. So they keep her (me), ship Corey here to ply her brain trade.

Corey squats on the floor beside her sister, Mara. Mara works outside now, far from me, laboring like an ordinary beast. I seek to imagine this raw pleasure of movement, coordination, satiny fluid motion. They are so tied to their bodies. They chatter, sweat, fart (a pleasant sound, like a hooting bird). Black shadows of beard spurt in their oily skins, lines of age, pink flesh splotches, sagging breasts.

I listen. My fine-tuned sensors slash through the clattering noise to probe the conversation. The entire table is Corey's to inspect.

Bradley: Kurt tells me you're doing okay.

Mara: Well enough.

Tsubata: She's quite dexterous.

Bradley: That's good, though it doesn't help much with why she was sent here.

Mara: I'm dexterous there, too. I've tried various special keying methods to break it down. It's not a simple decoding problem.

Vance: That was obvious years ago.

Mara: That's why I had to check: what's obvious to you may not be so obvious to them. I don't think the Puzzle can be solved until we understand the life form that sent it. There's a hidden assumption there. Some reason we can't decode the signal.

Bradley sighs: (Corey sees that he is old in a way other people are not.) I still don't see how anything alive in that atmosphere can build solid devices. Without land, how can they—?

Vance: That's elementary. We've been through it.

Mara: But you haven't understood it. If you had, it would be over, solved.

Vance: You can't know that. We may be entirely wrong. It's not my field but maybe we're misinterpreting that line. Maybe the signals don't come from that big planet.

"Bradley: If they don't, then we're wasting a great deal of money out here.

Mara: They do.

Vance: It must be nice to be so certain of everything.

Bradley: I'm certain of nothing but I've worked with dolphins. So has Corey. Unless we find life on Jupiter, that's as close as the Solar System comes to our hypothetical life form. There isn't much I can generalize about. The dolphins had a substantial forebrain, a broadly expanded cerebellum, and long before we did. Fifteen, twenty million years ago. Their complex storytelling culture evolved; it's amazing. They never knew a damn thing about technology.

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Mara: Or the whales. They were intelligent — all the analysis shows that — but you wiped them out. They couldn't protect themselves against a few technological Ahabs.

Bradley: They used their brains for other things, better things.

Mara: What's better about dying?

Bradley: The whales used the ocean surface as a resting place. It was where they breathed, worked, mated, gave birth. We caught them where they were most vulnerable. They never learned how to deal with the threat.

Mara: So we can't generalize from that. Anything on Jupiter can't know there is such a thing as a surface. The ammonia is hundreds of kilometers thick.

Tsubata: But we've never rejected the moon hypothesis. To me that's always made more sense.

Bradley: Perhaps. I've just looked at some of the reports from Ganymede. The environment looks hopeful, if you can imagine a life form evolving at 150 degrees Kelvin. Actually, Titan is a better bet.

Mara: Have they worked out the radiative transfer mechanisms in the Titan atmosphere? The convection between layers should be enough to drive a pretty substantial ecology.

Bradley: Yes, but it doesn't. There's no life on Titan.

Vance: As far as we know.

Mara: What about those crystal structures?

Vance: Well, they don't move around. They do seem to exchange material between each other, but it's not what you could call an ecology.

Mara: He didn't say ecology — he said life. Bradley, I thought those crystal things were dependent on the cold trap at the poles, where the methane and ammonia stacks up. That leaves water as the only volatile condensate abundant at 150 degrees Kelvin.

Tsubata (softly humming): What kind of music is that?

Mara: Rossini. Look, I agree the moon hypothesis isn't a bad one. But why doesn't the Puzzle show any moon at all? It seems improbable they would fail to distinguish between satellites of planets and the planets themselves.

Tsubata: Maybe they feel it's obvious.

Vance: Why?

Tsubata: To things living on a moon, a planet like Jupiter must seem vicious, hostile. We, on the other hand, spend far more money studying Jupiter than Titan. Preconceptions dominate every thing.

Vance: This dessert is dreadful. I still think even beings on a moon would recognize a distinction. They'd know that some planets

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could be the same size as moons.

Mara: But the terrestrial-type planets in the Alpha Libra system are probably too close, burned to a crisp. It's like Kurt said — preconceptions dominate.

Corey: Perhaps they deceive us — purposively. (The box speaks rarely, only when necessary.)

Bradley: Then why send the message at all if you're going to lie? It's pretty clear they're responding to our early UHF transmissions, or the DEW-line radar pulses that got out of the atmosphere. I doubt they've ever contacted another civilization. It's unlikely — we're so close.

Corey: My point, exactly. Too close. We come and visit — we are too strange. So they say they live in a gas giant world, knowing it is hard for us to enter the deep atmosphere. A smart move.

Vance: Why? If they're intelligent, they should desire contact.

Corey: With you? They break down your television and see you bang-bang shooting each other. White man hates black man and ordinary hates nippy. What about aliens?

Bradley: Then why call us at all?

Corey: Perhaps that is the real puzzle.

Bradley nods carefully and Corey sees that his hint has been caught. For a moment I filter my input and see them drop away, becoming tiny, as though I now watch from some high, secluded sanctuary — an alien vantage point. They do not realize, even sister Mara, that I see so clearly and well. Bradley speaks calming words, knowing there is discordance within Corey. But what kind?

Bradley (finishing): — would be the point of making the rest of the signal — those miles and miles of taped message — so hard to decipher? They may be secretive, but I don't think they're whimsical. What's the time?

Tsubata: Three clockwise.

Bradley: I've got an appointment. Be glad to get out of this high-gee level, anyway. It takes months off my life.

Corey (done): The obvious is not always untrue, Dr. Reynolds.

But they shrug off his final remark, fearing the discovery of implication. Mara's eyelashes flicker and she glances at the box without appearing to do so. Stillness descends like spring snow. They stand, chairs scrape, spoons and forks clatter. Activity slowly swirls; they break camp. Mara slips among them. They shuffle in a herd, Bradley at the fore, Tsubata at the flank. My box whirs, whines, whirs.

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III.

Slumped in a chair, Bradley peered across the neat, flat expanse of his office and waited for the door to pop open. In one fist he clutched the crumpled remains of the message from Earth which only moments before had been thrust into his hand. It was a damn shame, he thought. Only yesterday, at the dinner hour, he had glimpsed a degree of genuine humanity in Mara he had not previously thought existed; it kept peeping through lately, at the most unexpected times and places. And now this — the message — that would ruin it. He sighed softly to himself. He had called them both. Nobody else would want to tell them.

It bothered him that the message had not affected him more deeply, in a less personalized way, but Earth seemed such a distant place, its churning problems of population and discontent, mutual fear and hate, of far less interest than the crystals of Titan. He often believed that he would not likely be returning; he expected to die somewhere out here. They had taken Tunisia away from him, but he had erected a new monastery here beside Jupiter, this office. Is it that I no longer care? he wondered, fingering the message. Has my heart grown cold and encrusted as the decades stretched past? Or is it only that I've grown stingier with my sympathy, that I care as much as ever, but about fewer things?

He thought he cared about Mara and Corey, though he did not like them. These genetic freaks — these nippies — he considered their very existence an abomination. A medieval attitude perhaps, but based fully on his felt belief that the human race, in mass, could hardly be improved or bettered. He had spent the last fifty years of his own life trying vainly to wreak some improvement in one solitary soul (his own), and he was far from sure that he had succeeded. Mara? An improvement? He did not think so. Intelligence was a virtue whose importance shrank as one grew old. And Corey? He shivered at the thought.

It went back to a young woman he had known at the Tunisian monastery, Catherine McClair, a devout and learned Christian, who had confided one still, silent afternoon that the Messiah had come to Earth.

He took her hand lightly in his, exulting in the smooth pink softness of flesh untouched by age. "Which one do you mean?" He anticipated a joke. "There are several."

"No, none of those." Her lips were painted red, an ancient fashion; her hair, drawn formlessly back, revealed on oval face. "Christ

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was God incarnate. I mean man incarnate."

"You'll have to explain that to me, Cassie."

She never sweated, hidden in her olive cowled robes. "God created man, don't you agree?"

"At times, yes."

"Then you must also agree that man's highest aim must be to reverse the process, to create God."

"No."

"And that's been done. By manipulating—"

"Not those freaks, Cassie." His hands shook from the shock of his horror; until this moment Bradley had loved this woman. He wanted to explain. "I knew one of them once in Houston. A thing in a steel box. It wasn't even a man, Cassie. You can't call that a god."

"And Mara?" she asked.

"Who?" He remembered that Cassie's father was a geneticist. Could her ideas have come from him?

"Father knows her. Mara is the one that worked. They've kept her penned up until now. The fools can't comprehend the wonder they've created. But she's it, Bradley. Mara is — she's godly."

He sometimes wondered how many prospective Catherine McClairs might live on Earth. Is that why someone had been so eager to send Mara way out here to Jupiter?

The office door popped open. Mara entered with Corey.

"Make this quick, Bradley," Mara said. "Tsubata and I are going out in an hour clockwise."

Bradley glanced at his desk, the scrubbed surface, the eighth avatar. High upon a barren bookcase Shiva also danced, chaos under control. He had tried to stock this room so that any possible spiritual mood might find solace. Nothing gripped him now, Christ or Buddha. This problem was wholly secular, like sex.

"I'm afraid I have some painful news for you, Mara, Corey. I received this message a short time ago." He gestured toward a chair.

She reached out in a practiced motion and plucked the message from his hand. In a flash, she had read it. "I've expected this." She handed the message back.

"And what do you intend to do?"

She grinned. "Haven't you got that backwards, Bradley? It's you who's got to act."

He knew that was true. "Mara, I'm going to have to—"

She ignored him bluntly, whispering at the box. "We've been stripped of our human rights, Corey, deprived of citizenship. Earth has finally decided that a superman isn't really a man. We're state property now. They made us, they own us."

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When the two of them spoke so intimately, Bradley felt lost, an alien in a land where the language was not his own. "Mara, this is serious. Genetic experimentation has been forbidden. There's some sort of religious revival occurring on Earth. I'm afraid I've been ignoring the news lately."

Corey hummed with sudden information: "It is the Christian revival. Man created in an image of God. Manip a desecration, blasphemy. Fourteen votes in recent United Congress elections."

Mara lit one of her long cigars, puffing calmly. She stared at the growing ash, then let it drop, studiously observing as the mass shattered into gray fragments. "When the elephant has slipped inside the Arab's tent, it's too late to cry no vacancy."

Corey whirred. Laughter?

"What's so funny?" Bradley asked.

"Your thinking is too slow." Mara abruptly dropped into the waiting chair and threw her booted feet upon his desk. "What's the present nippy — I love that word — population on Earth?"

He saw no alternative to playing her game. "A few hundred."

"Three hundred seventeen. And do you know where they are, where they work, live, think, defecate? Give it some thought, Bradley. Are they peasants, engineers, programmers, poets, painters?"

"They're involved in high science, I suppose."

"And the highest of high sciences?"

His master in Tunisia had lectured similarly; force the student to uncover himself. "Isn't that a matter of opinion? Physics? Biology?"

"Christ, Bradley." Another ash fluttered down. "War."

"War?"

"We control your arsenals. They won't work without us. Do you think we're stupid, blind to probabilities? This has been foreseen."

"You're talking about some form of nuclear blackmail."

She grinned. "Now you've found it. Shocked?"

"Appalled is more likely." He leaned across the desk, meeting her high blue eyes. "Blackmail is effective only when you're prepared to have your bluff called."

"We are."

"Mara, you won't blow up the world." There was a tingling silence between them. Bradley felt a welling sense of dread.

"Who said anything about the world? Pick a city. Then two. Leave us alone or we'll blow them up one by one." She snapped her fingers. "Governments are created for only one purpose: to maintain order.

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Study Chinese history someday, the dynastic cycle; it's all there. We'll win." She stood up, point proved, victory achieved. Corey hummed at her heels.

"Wait, Mara," he called.

She paused. "You disagree?"

He spoke truthfully, with sadness. "I don't care."

"Then what?"

"I'm restricting you, both of you, from this moment. I don't want you to leave your quarters."

She bristled, glaring, her wall of complacency shattered at last. "You bastard, you tried that before."

"But I mean it this time, Mara. It's my duty to maintain order here on the Orb. I can't let you outside — not now."

"Don't you trust us?"

"It's not you, it's the others. This order—" he meant the message "—is like a license to kill. We have our Christers here, too. I don't want to take the risk."

"It's not your risk, it's mine."

He shook his head, smiling grimly. He had never seen her so angry, so human. "I think you'd better study some Chinese history, Mara. Or Confucius. The leader's responsibility for his flock." He waved a hand at the trinkets of his office. "I don't intend to have you cost me the mandate of heaven."

"You won't get away with it."

"I have."

Mara reached out and with a single wide sweep of her hand sent the chess pieces toppling loudly to the floor. She stared at the mess she had made.

Corey hummed. "I assume you have elected to conclude our contest abortively."

"That bastard Bradley. Three full days now." Her voice sounded tired and weary to her own ears. "I'm sorry." Reaching down, she began to retrieve the scattered chess pieces.

"Perhaps you are being unfair to Bradley. I have ventured into the corridors. There is an ugly atmosphere flowing there. Hate rushes with the wind."

"There isn't any wind onboard the Orb. And that's not hate — it's fear. Some of them have relatives in Tokyo; more have friends. In a few days, *blooey*. Then they'll learn."

Mara's room was a cluttered, jumbled place. Stacks of papers, charts, books tilted precariously upon a low table. There were two beds, a filthy oven, the table that held the chessboard. Music shrilled lightly from twin overhead speakers — a jazz quintet. The rectangular certainties of the room seemed blunted by the clutter — musty, airless.

"What is this?" Corey had discovered something of interest upon the second bed, a sheet of paper curled between two huge

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books — T'ang annals. The box loomed above the rumpled sheets.

"It's what you think." Mara had replaced the chess pieces exactly as they'd stood before the sudden wave of destruction. She should be winning in four moves. "I drew it myself."

"But I failed to make note of its presence before."

"It wasn't here before. I drew it from memory. With all these dog days, I needed something more than chess to fill my mind. I thought I'd solve their Puzzle." The sheet of paper was the grid. "That ought to prove something."

Corey rumbled back toward the chess table. A new recording suddenly spun: *Verklarte Nacht,* an old favorite. Corey said he had never learned to decipher music; to him it remained random sounds.

"But what can it prove?" said Corey. "They admit our intelligence."

"But not our power." Mara let her king's knight pounce. "I solve the Puzzle, refuse to tell. Then what?"

"They will force you."

"Torture? Sticks in my fingernails, a hot iron up my ass? I'm too stubborn. They give me my freedom — a guarantee — then I'll tell."

"But what's to prevent them from reneging later?"

"Bradley. He's honest."

"Then they'd depose him."

"I—" Corey was making her feel petty. She sighed, aware that he was correct.

"But you haven't solved the Puzzle, have you?"

"No, but—" she strengthed her voice "—I will. You ought to know, studying the dolphins and whales. They were extinct before we knew just how intelligent they were."

"You should watch your pronouns." The game had continued; Corey moved his king.

"Huh?"

"When you refer to the human race, sometimes it is they and sometimes it is we."

"I often think of you as he and she rather than it."

"But you know the truth."

"Do I? Besides, it was a nippy who solved the puzzles of dolphins and whales. Since I've been here, I haven't really tried. I've romped and played, a hedonist of the spaceways. With my full energies, I can crack it. I already feel I'm closer than Vance and some others." Her queen darted forward; she played black. "Check."

"How?"

"By getting into their minds, slipping inside their skins. The aliens, I mean. If I know how they think, then I'll know what they sent. Jupiter would help by spilling his secrets. Without that, it will be hard."

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"There may be none."

"Checkmate."

"Another game?"

"If you wish."

"No." She folded her hands upon the finished board. "I want you to tell me some things about the dolphins."

"Such as?"

"What we were talking about before." She reached for a cigar. For the first time, she smoked for pleasure, not because the habit irritated others. "Tell me how they think."

Her questions dark like milling wasps, stinging my memories, sucking dry my knowledge. I fear the depth of her perceptions. Mara is more than them, greater. She can see.

Corey: They think in curves, high spanning arcs. Men, including us, are limited to straight, flat lines. Some say this is the result of the linear nature of our speech forms, but I blame the shape of our world. We exist solely on the surface. Subjectively, the Earth is a two-dimensional plane. The ocean bears three. Thought follows environment. An intelligent micro-organism will never know the moon.

Mara demands knowledge of the content. What do they think about? I proceed with utter caution, selecting my pronouns with careful malice.

Corey: They think largely in terms of themselves, emotive thought, introverted. Because of our ability to create and use tools, much of our thought is devoted to such extraneous objects. Our artifacts dominate us. We are smothered by them, drawn outward like serum from a hypodermic. In the dolphin vocabulary there are more than a hundred distinct words dealing with some different aspects of the spiritual sensation produced by leaping from the water and hanging briefly suspended in midair; there is no word for work, puzzle, thing, all extroverted concepts. The whales were more sophisticated. Their speech ran to pure sound. Songs without words, symphonies of noise, pure communication. How did they think? Similarly? That we shall never know.

Engulfed by my colorful digression, Mara wishes to hear more of the whale songs.

Corey (grinning): The form was primarily a storytelling vehicle, a wordless opera. Not simple folk-tales either. As far as we have determined, some of their songs run weeks in length, with the plot complications of Dickens, the complex levels of Joyce and Mann, the poetry of Homer.

Mara says, "I'd like to hear some."

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Corey: I can arrange that. (It hastens toward the door. Something is welling up inside it.)

I flee from her maddened thoughts like a dark medieval knight pursued across the field of battle by some fiery, voracious dragon. Inside me the pulsing yellow fat coils, spasms, coils.

Bradley's proscription left her free to roam at will in the residence quarters. Still, Mara moved carefully through the long corridors. With the horizon so close at hand it sometimes seemed near enough to be touched, the chances of running into someone by mistake were too strong. Twice in her quest she darted into strategic doorways to avoid being seen. Once Bradley himself hastened past. Tom Rawlins danced angrily in his wake, hands flashing like knives. "That stupid bitch," he cried. I wonder who? thought Mara.

Kurt Tsubata seemed more surprised than displeased to see her. The amber lines of his face deepened, as seen through the door slit.

"For God's sake, let me in."

"I thought you were restricted."

"To the quarters, that's all."

"I have seen Corey."

"Kurt, let me in. Please. Now."

"Oh, sure. I'm sorry." He showed her to the one soft pillow that intruded upon the hard angular vacancy of the large room. A few scattered books — technical journals — peeped from the wall slots. The overhead light was harsh, brutal. Tsubata shown like a ghost. Mara dropped down.

"I need a favor."

He seemed amused. "From me?"

"Yes."

"What? Bradley's head?"

"Not this time. I want you to take me out."

"But I thought—"

"That's right — you're not supposed to." She could have lied, fed him a good story, but she was too tired for that. Twenty straight hours of study had drained her energies — twenty straight hours staring at the Puzzle. "I want to see Jupiter."

He snuggled close to her on the pillow, two shipwrecked sailors perched upon a precarious lifeboat; the floor swept away from them like the endless sea. "I can take you to the screens."

"That's not good enough." She moved closer, tilting her head to see his face. "I'm trying to solve the Puzzle. Laugh if you like."

"No, I won't. How can I? The Puzzle's beyond me."

Humility: "Me, too. So far. To solve it I want to learn how these beings think. I can't do it cooped up inside my room."

He considered, drawing back

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from her, nearly slipping from the pillow. "You're asking a lot of me." What did he do in this room, alone? No books, no music, surely not chess. He rarely socialized. "Bradley could have me dumped. I'd spend my tour cleaning floors, scrubbing toilets."

"It's not Bradley. It's the others. They're the ones who are afraid of me. Of Corey. That's why I want to solve the Puzzle."

"So they won't be afraid of you any more? So they'll like you?"

If he wanted it that way... "Yes."

Tsubata was not a fool. "It may not work. There are rumors, stories trickling from the bridge. Your people on Earth — they are doing something, causing trouble."

"The trouble was not our idea, Kurt." She went toward him this time, snuggling. "We just want to be left alone."

"I have a mission scheduled in five hours clockwise. Another satellite is blinking. If you want, you can come."

"Five hours. Fine." She was proud of her seductive charm. "That should be just right." She reached for his hand to draw it toward her breast.

Tsubata stood up suddenly, shaking his head. "Mara," he said, "I don't want to go to bed with you."

She withstood the shock, meeting his gaze with little anger. He was trembling now. "Why, Kurt? I thought that's why you said yes."

"I know."

She persisted. "Well?" She stood beside him.

"I'm afraid..."

"Oh?" There was no triumph in her voice; it trembled.

"You're not human," he said, watching the floor.

Mara returns with a second scent. Corey sniffs sharply.

"He refused?"

"Oh, no." Her hands dart, removing the outer skin of cloth and plastic, exposing the flesh, the double scent. "We're leaving in three hours. I want to get clean."

"You have done it with him."

She glances at me. "Ah, yes."

"I see, I see. It is like...?"

"I can't quite describe it, Corey, really." She glides toward the shower stall; the scent will be excised, forgotten.

"As I understand it, the process ends in a terminal, exhausted state. Working together, along a mutual train of explorations, the two eventually reach the same conclusion."

But Mara is turning beneath the drumming of water and does not hear me. Corey wheels toward the door. The corridor outside rushes close to his face. But in the

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ruddy light he has no face. Corey rumbles, groaning uphill.

Bradley eyed Tom Rawlins. There wasn't anyone in the Orb he disliked more, but he had taken pains to disguise the fact.

Uninvited, Rawlins dropped into the chair, crossed his legs, locked the ankles. He lunged forward, indicating the high stack of messages piled in one desk corner. More distantly, Krishna surveyed the scattered mess — man as a paper-creating animal. On the wall the Buddha winked his third eye.

"What's the situation on Earth?" Rawlins asked. "I hope there's been no compromise."

"No, it's the same. The manips will destroy Tokyo unless their citizenship is returned. The United Congress says no. Stalemate." He couldn't resist an irritated barb. "Is that what you want?"

"I want them dead."

"Why?"

"Because they're wrong. Because God never meant—"

Bradley cut him short with a rare display of anger — his face flushed. "You didn't come here for that," he finished, more calmly.

"Then you don't know." Rawlins seemed pleased by that.

"What?"

"That damn woman, that thing. I just now heard and came straight to you. If the word gets around the Orb, there'll be hell to pay."

Bradley wished he smoked, anything to penetrate this man's dim, dull skull. "What word, Tom?"

"She's skipped out on you, Bradley, gone out on a shuttle with Kurt Tsubata."

The truth, after such suspense, flopped badly. "Is that all? The way you were hinting I was afraid she'd raped your mother."

"More likely Tsubata.", Rawlins sneered. "So what do you intend to do about it?"

"When?" Bradley's stomach rumbled audibly. He had to remember to take a meal. The pills never satisfied after the third day.

"Why, *now*, of course."

"Now, nothing. When she comes back, I'll do something. Spank her. Tweak her nose. Who cares?" He knew his fatigue was showing. "With all this going on—" he tapped the stack of messages "—you're acting awfully trivial, Tom."

"But don't you see? It's all the same thing, Bradley. She's one of them. Do you think she'd hesitate a minute to blow up Tokyo, kill millions?"

"Is that why she went out on the shuttle?"

"She told Monitoring, after she left, she wanted to look at Jupiter.

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It would help her solve the Puzzle. Can you beat that?"

"It's our mission, Tom."

"I want her brought back right away. I want her not just restricted but quarantined. I've talked to the others. We're all agreed."

Anger was an emotion Bradley rarely experienced any more. Either age or meditation had purged it from his system. He missed it. *Act without thinking, do it now,* he mused. The mystical ideal. Zen archery; split the target. Anger cleansed in a way that sorrow, love, joy could never equal. "Now you listen to me, Rawlins. This isn't a military garrison. I'm not the captain of the guards. I'm an administrative officer, freely elected and chosen, subject to immediate removal. Nobody tells me what to do. Not you, not Mara, or any others."

"But she's not even human!"

"Yes, she is. In fact, I think that's her problem. She's too human: arrogant, irresponsible, selfish. She does what the rest of you would do if only you possessed a fraction of the confidence she has. I don't like Mara — I don't like what she is. But call it human — she is."

Rawlins stood up, his legs unwinding. He spoke with care, plainly caught by surprise. "You mean that, Bradley?"

"Yes."

"And when they blow up Tokyo?"

"That has nothing to do with the Orb."

"This is the end for you. You know that?"

"Tom, get the hell out of here."

Bradley gave Tom Rawlins three additional minutes after the door had slammed behind him, then moved away from his desk. He checked the outer corridor before proceeding. When he entered Monitoring, he found Leigh Duffy, a bright biophysicist, on duty.

"Can you raise Kurt Tsubata's shuttle?" he asked her. "I want to have a talk with him."

"And Mara?" The woman smiled.

"The thought did enter my mind."

IV

Tsubata turned the shuttle. The newly repaired satellite looped behind. Mara turned her gaze back to Jupiter, sighing.

"Do you mind if I sleep?" Tsubata asked from beside her.

"Mind? No."

"I wasn't sure if it would disturb you."

"The opposite, actually."

"I knew a very brilliant man once, I was very young. Next to you, until I met you, he was the only one I'd known. I thought you might be the same."

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Jupiter's oblate form obliterated her view, the bulging waistline of a plump satisfield giant. The savage electrical storms of recent weeks stirred the dappled bands; the north polar region churned with an awesome fury. It's just like me, she thought. Neither is Father Jupiter nor am I ever fully at rest.
"I don't understand, Kurt."

"He was odd. You see — he was a professor at the university, and I was only an average student — he would often come to my room. All day, sometimes all night, we would talk. It was rarely me. Just him. Talk and talk and talk. Any subject you can conceive for hours. Then, suddenly, he would stand and shout."

"Yes?"

Tsubata laughed. "He had found his answer. When he had a problem he came to me. Somehow, in the talking, the solution would come. I don't know how. It worked."

"Sleepwalkers. Einstein was one, too. I sleep better alone."

"I'm sorry for that."

"No," she corrected hastily. "I don't mean that. Thank you, Kurt. For asking I mean. That was very considerate."

"I thought it might be important.'

"Yes, thank you."

He slept.

Jupiter danced and whirled. The stars glittered, unhindered. She had always been alone. After birth, a couple had been selected to raise her. They were stupid and their son, four years older, had made her life a torment. Once he slipped a frog inside her first brassiere, which sounds like a warm, funny childhood memory, but she hated him for it. The man she recalled only as high, bushy brows, speckled with gray, and a voice that chattered a mile a minute. A biologist, teacher, Nobel candidate. The woman talked constantly, rattled by fear. Mara learned early that she could inspire terror, but fear bred hate and at fourteen she went away. She never saw her parents or brother again. After them, there was no one else. At eighteen she told the world she was her own person now, and nobody could control her movements. Jupiter groaned upon its high axis. She studied the shifting features. A photograph freezes life; the eye permits it to flow. Some faceless man captured her virginity. She took drugs, slept with other women, gambled, drank, stole money.

Life ran stale, bread kept uncovered too long. At twenty-six she ran away to Jupiter. Where else did this plump pink giant, prince of Sol, spin?

There were tears in her eyes.

Reality, she was understanding,

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lies here. So many claim — Bradley would — that the phenomenon is internal. A lie. Utter horseshit. The human body smothers reality, keeps it trapped. Emptiness is free — outer space. My God, she thought, if there is an answer, where else can it be? The void.

In time, the yellow dot of the Orb expanded to assume the familiar concrete form of a tin can. Tsubata slept. She let him. Inactivity dulled her senses; she thrived upon the constant stimuli of daily change. It would be good to bring the shuttle home alone.

Hesitantly, she contacted Monitoring. Twice already Bradley's voice had chirped uninvited in her ears. She had ignored him, impersonally, simple. In time, both times, he had gone away.

A women physician, Norah Mann, stood duty. She answered Mara's call.

"Is Bradley Reynolds there?" Mara asked.

"Yes," said Norah Mann. "Do you want to talk to him?"

"God, no. Tell him to go to hell."

"He says he doesn't want to talk to you, either."

"I bet."

"He'll talk to you when you return."

"Tell him I can hardly wait." The Orb dominated her forward view, the ugly seams and stitches in its unburnished hide. Mara exchanged the necessary data with Norah Mann.

"You're getting very close," Norah said.

"Yes." Mara cut the engine. She reached for the manual steering controls. Tsubata snored lightly in her ears. The job was a mechanical one, the berth a ring to be captured.

She pressed the controls, requesting a burst of air.

Nothing happened.

Automatically, driven by universal order, the shuttle continued its rigidly elliptical course. Mara calculated swiftly, jamming the controls. At this rate she would miss the Orb entirely. The blankness of space loomed ahead. No, no, she thought.

Puzzled, keeping calm, she released the controls, then tried again. A slight turn would possibly suffice.

Nothing happened.

Norah Mann shouted frantic questions. Bradley's voice could be heard rising in the background. Mara ignored both of them. She jabbed an elbow at the sleeping man beside her. "Kurt, something's gone wrong."

He came alert at once, and she could tell by the way that he moved that he understood instantly the danger they faced. Stupid? She

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doubted his IQ totaled half hers.

Without a word, he reached past her and gripped the controls.

They no more responded to his touch than hers.

"Is something broken?" she asked. "Damaged? Can't you do something? We'll miss our berth." The orb seemed directly beneath them now.

Tsubata said, "Jump." Reaching down, he unfastened the straps that held him. He gripped the chassis with one hand. "When we're so close you can smell the hull, then do it."

"But can't they come after us, pick up up?"

"Do you want to wait for that? I said jump." Tsūbata leaped, quick and clean. Mara followed. Together, they slammed against the hard-pocket hide of the Orb. Mara struggled for a handhold, gripped something, braked her own motion.

The shuttle drifted on past the Orb. Within moments it was lost from view.

Jupiter, unmoved, continued its stately spin. For a long minute, Mara saw nothing else.

A voice ran in her ears, soft, unexpectedly calm. "You two hold on our there. I'll have someone out in a few minutes."

"Fine," said Tsubata. "We'll wait, Bradley."

"I hope Mara won't get bored. She doesn't seem to like staying in one place."

"I'll be fine, Bradley."

"Maybe you won't disobey my orders any more."

"Oh, shut up, Bradley."

"I was only making a suggestion."

"Well, don't."

"I'll see you shortly, Mara."

When Mara once again reaches her room, where I stand poised beside stationary chess pieces, Bradley Reynolds bustles behind, his exterior welcoming smile (directed toward me) meant to conceal a maelstrom of interior agitation. "Corey, how are you? We just got Mara back."

Corey: I am glad.

"Well, you ought to be," says Mara, "because it was damn close." She blazes with anger — also fear — but both emotions lie buried so deep that actual tears, as if bearing grief, rush to fill her eyes. It becomes difficult to perceive her words, flowing as they do with such savage swiftness. I am not important here. It is Bradley who dominates her attention. He flops on the second bed and casually studies Mara's replication of the Puzzle.

"Mara, you didn't come close to being killed. There's no need to cry murder. Wait till something really happens, then explode."

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Her finger shakes as if bearing a life of its own. "You said so yourself, Bradley. The shuttle was tampered with."

"Tsubata said that, not I, and he won't know for sure until we recover the craft."

"I know. You know. It happened before."

"You weren't in any real danger."

"No, but what if it had happened earlier. Kurt said that, too. A freeze-up in the lateral pipes. If the blowback injured one of us — guess which one? — that far out, hours from the Orb—"

"But it didn't happen." Standing, Bradley approaches the chessboard. "A fascinating game. I haven't played it in years."

Mara grabs his shoulder, turns him. Her flesh touching his. The thin garment he wears barely blunts the physical contact. "It must be the same person. Someone wants me killed. And they won't quit."

Bradley softens. The muscles that hold his jaws and cheeks grow weak. Both arms stretch forward from his body to touch Mara upon the shoulders. Corey can be ignored as if it is not present. Steel box. Furniture. A vacant television cabinet. "You shouldn't have gone out on the shuttle, Mara. I warned you it would be dangerous. I was protecting you, not them. Look, if you took a walk through dark Calcutta and did not return alive, whose fault would that be?"

"Then blame me, damn it." She draws triumphantly away. "I told you why I went out there."

"To solve the Puzzle," he says precisely.

"Yes."

"But you didn't."

"No, but I will."

"I believe that."

"Then believe this, too: someone on the Orb wants to kill me."

"If it's true, then it's up to you to be careful until this thing has run its course."

"What course? Look, Bradley —" she waves disparagingly at the room in which so many games have been played "—I can't stay cooped in here with Corey. It's not I you should be worrying about. Find this man and stop him."

"And if I can't? I'm not a detective. Your own people on Earth are right this moment threatening to murder ten million people. Next to them, your life is minor, Mara."

"The attacks on me began before that. I'm not responsible for them. Jack the Ripper was a human being. Jesse James was an American. Do you want me blaming you for them?"

"I still think you should stay here." His long, fleshy hands return to their prey. He holds Mara

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close, his eyes reaching toward hers. "Let me look into this. I'm up to my ears in trouble now, but I can do something. If the attack was deliberate, it had to be someone who knew you were going out, who was able to tamper with the shuttle. I'll ask Tsubata whom he told."

"He promised to tell no one."

"Let me talk to him."

Mara laughs shrilly. "And narrow your list of suspects? What was it the last time? Everyone but you and Corey? How many this time? A mere three hundred, two hundred, just fifty. Only fifty people within the adjoining few meters who want me dead. I feel good now, Bradley. I really do."

"I think there'll be fewer than fifty, Mara."

Corey here shuts down. It is the best he can manage simply to maintain the basic functionings of his system. Often inside her box it becomes so very dark like this. Light is one phenomenon denied Corey since birth. Others speak of the raw sensation of heat against skin. A winter's bliss. Mara may be talking. Bradley may reply. Corey hears nothing. Within her box she returns to the moment of girlhood birth and relives that experience. Breath comes slowly. A whine. A cry. A shriek. Born, life, born. He cries to his dolphins and hears their clicking, clacking chatter. One sleek beast swiftly glides through still blue water, then leaps, unhindered, toward the high lilting sun. For Corey nothing shines. (He) (she) (it) Corey expires. Corey?

Mara gazed anxiously at the dark, silent, motionless steel box. "What happened?" she asked Bradley, not for the first time. "He can't be dead."

"I wouldn't have any idea. We'll just have to wait."

Norah Mann's dusky blue uniform stretched taut, an abstraction detailing her bones but only a hint of flesh. She crouched beside Corey. It seemed odd when she produced a stethoscope from a valise and laid it against the side of Corey's box. Mara laid a hand upon her lips to avoid giggling. Did Corey even have a heart?

At last, Norah Mann turned away, replacing her tools. "No, it's alive," she told them. "I don't know what's wrong, but it's not dead."

"You're certain?" Mara asked.

"As much as I can be. I'm no expert on steel boxes. None of us are. But the brain waves are sharp, clear, very obvious, even stronger than a deep sleep. Strong C delta signature. The other bodily signs, those it seems to have, are quite normal. If there is something physically wrong, I can't discover it."

"And you don't think we should

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call another doctor?" Bradley said.

"If you want. I don't think it would do any good. It would take someone who had known that thing since it was built, born. The whole structure is just too odd. Have you ever seen an x-ray?" She reached for her valise.

"That's not necessary." Norah Mann was young, pretty, very dark. Bradley didn't seem to trust her. The prejudice of age? Mara wondered. God, can he have that against me, too? "What do you recommend?"

"Stay with it, I suppose. In case anything does occur. I can come here every few hours to run additional analyses. I can't think of anything else."

"I'll stay," Mara said. "This is my room. Besides, that way Bradley will be kept happy, too."

"And you're fine?"

The question puzzled Mara. Why did this woman want to know that? "Yes, I'm fine."

"I ask—" she seemed suddenly embarrassed "—because I was there when that accident happened."

"I remember."

"Do you? I know I hadn't met you before."

"Few people on the Orb have met Mara," Bradley said.

"Which undoubtedly pleases them."

"Oh, no," said Norah Mann. "Don't think that. I can't speak for everyone else, but I've been dying to meet you. Just think — you know so much. Why, you could talk to everyone all at once, and that way nobody would get bored. One trouble with the Orb is that everyone is such a specialist and there are so few in each category. It's hard for anyone to find someone to talk to. You can't even use the weather. We don't have any here."

"That's nice of you to say," Mara said.

"Well, it's true. Everyone anticipated your arrival, but then you came and just seemed to disappear. You got involved with the Puzzle, with them—" she indicated Bradley with a surreptitious tip of the jaw, the Orb power elite "—and we hardly saw you."

"Maybe I can change that," Mara said.

"Oh, we'd be glad. You're different. Out here everything becomes so similar, monotonous."

"Even when my people are threatening to blow up the world?"

"That's not you," Norah Mann said, with apparent sincerity. It was pleasant to hear words unshadowed by implications.

"I don't know who else."

"The ones like that." She pointed at silent, still Corey," You — you're not much different from the rest of us, just smarter.

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During the two days which had passed since Corey's strange withdrawal, Mara had not once left the quiet precincts of her private room. She replaced the phone, turned away from the wall, and told Kurt Tsubata, "Bradley said he'd come."

"Now?"

"Yes."

Tsubata smiled admiringly. "You could have convinced me, too. But—" he touched the drawing of the Puzzle; it lay beside him upon the wrinkled second cot "—is there really something here?"

Mara crossed the room and sat down, edging cautiously past Corey. "I look at it this way, Kurt. What's the Puzzle all about? It's communication, that's what. They're speaking one language and we're speaking another. Who could be better fitted to solve that than I? I don't speak the same language, either."

"It sounds like English to me."

"It is and it isn't. I mean nothing against you, but there's no way you or any other man can possibly understand the inner workings of my mind. And I'm not half so weird as something like Corey."

"Because you're intelligent?"

"That's part of it."

"Because you never had a mother or father?"

"That's minor. No, it's just because I'm different — that's the only way I can put it." She smiled. "If I could describe it better, then there wouldn't be any problem in the first place."

Bradley arrived with surprising swiftness. The lines in his face appeared to have widened and spread the last few days. For the first time since meeting him Mara felt the true effects of this strange man's immense age. He had always seemed fifty, no more than sixty; now he had soared past one hundred.

"Just before I left the office another signal came through. The deadline has been extended again."

"What deadline?" Tsubata asked.

Bradley frowned with irritation. "The one her nippies have established for destroying ten million people."

"They won't do it," Mara said. "You were right all along, Bradley. It's just a bluff."

Her words failed to console him. He crouched upon the floor, the high shadow of the chess table looming gray above him. It was not an impressive pose; he seemed a weary man. "If I were they, it wouldn't be."

"You'd blow up the world to save yourself?" Mara asked, astonished.

"Yes." He nodded sadly. "To save my people."

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"Well, it won't happen." Her own voice was hushed. "You said there'd been a delay."

"We'll see." He stood suddenly, mechanically. "But you didn't call me here for that."

"No." She reached toward the cot, gripped the Puzzle paper. "It's this. I've had an idea."

He nodded. "So you said. Well, what?"

"I—" she could see this would not satisfy him "—I really don't want to tell you now, not yet. I don't know enough. It comes from something Corey told me once. About the dolphins."

"I know about the dolphins."

"Yes, but that was only the beginning."

Barely a flicker of interest had crossed his features. She guessed Bradley was tired of the arguments, the constant political infighting. Tom Rawlins still wanted Bradley removed as commander; strangely enough, Rawlins often proved a powerfully persuasive man. "Kurt," said Bradley, "do you know anything more about this?"

"Not a thing. I wasn't here when she had the idea."

Bradley shook his head. "Mara, this really doesn't seem so urgent to me."

"But that's not all." Mara felt her voice rising and fought to subdue the pitch. "I want to ask your permission. My idea. I don't want to leave it here. I want to go out."

Bradley frowned blankly. "That's impossible."

"Are you saying that," asked Tsubata, with unexpected force, "or is Rawlins?"

Mara was more tactful: "It's absolutely necessary, Bradley."

"No, it isn't. If it was, you'd tell me what it's about. If I dared to let you leave this room, they'd lynch me as soon as fire me. You've gone out before — with Kurt. It's never helped."

"She wants to go farther than that this time," Tsubata said.

"To Jupiter," Mara said. She took a deep breath, then let the words explode with a rush. "A glideship into the atmosphere."

Bradley shook his head in stunned surprise. He looked at Tsubata, not Mara. "Now one of you is mad. What can you find that an unmanned probe can't?"

"Life. Intelligent life."

"You'll be burned to a crisp, Mara."

"Then let me go," Tsubata said. "Mara is important. It will hurt the Orb if she dies. But I'm replaceable. You can risk me."

"Not for nothing." Bradley remained unshaken on this certainty. "Mara hasn't shown either one of us why a death is necessary."

"Because —" Mara began.

She was interrupted by a hum.

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A growl. A buzz. Corey glowed with sudden life. His voice purred. "Then let me go instead."

Bradley spun around. Mara's heart fluttered: high, birdlike, swelling with suspicion.

"You can let me go," Corey said, "because my life is worthless to everyone. I am the thing in the box, a metal man. If I do not perform this feat, then who else ever will?"

"Me," said Mara.

"Someone," said Tsubata.

"No, Corey." Bradley nodded with abrupt decisiveness. "He's right. It's got to be him."

V

Bradley lounged, letting things happen with an easy rhythm of their own.

He propped his feet up, taking the slight pressure of weight on the knobby end of his spine. Bad for the posture, he remembered. Margo Landau (biochemist; sixty-eight; possessing a special talent for holding him just so, legs akimbo in the weakened gravity, as he came to his shuddering aged release) would tell him so, nag him gently. Margo was precisely what he needed to keep him in touch with himself. He was reasonably sure that was why she was assigned to the Orb; everything here was calculated. Being with her resembled those chance moments when, accidentally pressing fingertips and thumb together, he felt the padded throb of his own pulse, the interweaving beat of all warm things.

He reached out and snapped on his viewscreen. A blue smear of light warped and rippled, then abruptly froze into a 3D scene from the Orb axis. Small spots of green, orange, red, yellow that he knew were suited men slowly nudged a large booster into its rack. The boosters formed a pentagon around the spidery braces of Corey's entry vehicle, the *Aurora*, a sleek glideship.

Bradley thumbed over a higher magnification. He picked out Mara's suit by number. Beside it glided the awkward box of Corey. She was showing him her shuttlecraft. Anything to keep Corey occupied, Bradley thought. And the box maneuvered itself well, when free of Mara's mothering hands. Its burnished metal sides seemed grainy and solid beneath the arc lights, more substantial than the glittering, colorful humans around it. A machine amidst its own kind, indistinguishable.

Something caught at Bradley's sense of things; he frowned. He watched Corey adroitly spin itself, fire a lateral burst of air and coast to the underside of the shuttle. Mara followed somewhat more awkwardly. The two floated back and forth across the metal

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strutwork, two phosphorescent invertebrates swaying in the wash of a vacuum sea. Yet one was at home there, one would not easily attract a human eye.

Bradley sighed, wondering why he had not seen things so clearly before. It was always the invisible that damaged you the most. *Confusions, delusions, contusions,* he thought wryly.

He unconsciously knotted his fist into a ball. He flinched; a cold hard spark of pain shot through his hand. It ebbed quickly, seeping through his fingers and burning away a layered numbness in his arm. Inflamed cartilage. Aching worn tissue, crying out. Bradley shrugged it off and reminded himself to tell the Orb's physicians. But only if they asked. He had things to do here, the moment he had prepared was coming to fruition. He did not want any medical song and dance now.

Bradley rubbed absently at the crow's-feet streaming from the corners of his eyes, and thought about Corey. He knew he had the habit of lowering his eyelids as he thought, letting his face droop into folded creases. Concentration made him seem sleepy to others, which in turn was sometimes useful. Giving the appearance of an old man nodding off in the midst of an agrument relaxed the opposition, made them careless. He had learned that trick decades before and it never failed. But for the moment, with no one to see, he relaxed instinctively and concentrated very hard on Corey and the mission that lay ahead.

The descent into the atmosphere was necessary; everyone had known that for some time. Automatic guidance systems were inadequate to the supersonic, raging winds of the Jovian belts. Direction from the Orb by radio link was impossible; the time delay would make the craft hopelessly sluggish. And Corey wanted to go, sought the sacrifice, whereas no human aboard the Orb did.

And perhaps it was best for that metal man to go now, into the deep ocean of gas. Better for him to take.

Bradley would let him go, would say not a word. The decision made, he took a gulp of coffee. It was an elaborate dance he oversaw here, a volatile mixture of talented, idiosyncratic people. The entire Orb was a spinning can of prima donnas. It had taken him months to understand how governing and leading such a group was possible, and it had never been easy. At first he was depressed, because he had little appearance of authority. But then, perhaps that had nothing to do with the gift of command. You cannot order a man to have a new idea.

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Click. A close view of the sleek glideship. Men feathered cables at the nose.

Click. The assembly bay. Men and women moved with quick, brisk efficiency. Bradley thumbed up the sound and picked out several languages being used in different parts of the bay. But the words seemed less important than the sound, to him.

Click. A video from Earth. An entertainment for those off shift. Two men argued hotly, gesturing, voices rising. Waves arched, curled, caved into white foam behind them. Their sentences were thick with slang; Bradley could not follow the logic of it.

Click. A hand camera peered into a quilted forest of printed circuits. Snouted pliers tore loose a wire and turned it under red light. "Supplex won't go here, too many precursors—"

A green button winked on his console. He switched to com-channel and found himself looking at Rawlins, the man's deceptively smooth face knitted into lines.

"One of my men just pointed something out to me," Rawlins said, the words spilling out. "Corey's going to have override on the glideship, isn't he?"

"Of course. He takes control. He had to."

"No, I mean while he's still near us."

"Yes. Might as well give him as much practice as possible. He had to do all that by seat of the pants." Bradley kept his voice mild, flat.

"What if he uses it against us?"

"How?"

"Smacks it into the Orb, how else?"

"Unlikely. That isn't Corey's motivation. He may be dangerous, but not to us."

"That sounds like a bunch of garbage to me. How do you know the motivations of a thing like that?"

"I don't, not totally. I have to sense the way he feels."

"That's a hell of a way to run a laboratory."

Bradley refrained from telling Rawlins that he dealt with everyone that way. In fact, it was the only way to run *this* laboratory. "You're not going to do anything, then?"

Bradley smiled, wishing that were enough for Rawlins. He was sorry that he sometimes lacked the presence to hold a silence for very long, and finally broke it, saying, "There's no need. Don't worry."

"I suppose you know about that hidden com-line Mara planted?"

Bradley shook his head. "That's your department."

"Damned right it is. And one of my men caught it right off. Mara patched into one of the telemetery channels. We found it connected through the cable shaft to a rig in

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her room. And there's *another* lead-in to her suit radio."

"So she could talk to Corey without going through Monitoring?"

"Yeah. Well, we cut that one right away, I'll tell you."

"Good."

"Don't want them talking to each other where we can't hear them," Rawlins added with a decisive, conspiratorial air.

Bradley understood Rawlins's ploy. If he let the statement pass he would be implicitly accepting Rawlins's division of the world. Mara and Corey on one side of an invisible line, Bradley and Rawlins and everyone else on the other. Ingroup and outgroup, the old illusions.

Still, Rawlins and those like him had been useful. Their mere presence drove Mara in a way nothing else could. Perhaps Corey, too.

"You can always justify terminating an unauthorized line," Bradley said wearily. "As far as I'm concerned, that's all there is to the matter." There, that was probably enough. Justification for the action, but no overt support. Rawlins would be kept dangling, wondering if Bradley would give him enough backing for a strong move against Mara and Corey at some future intersection. And in turn, Rawlin's persistence would seep through somehow to Mara and hone her wits that much more. The dynamic equilibrium between the two would go on, each driving the other.

Bradley murmured a good-bye to Rawlins and switched off. He needed time to think, to integrate all the changing variables into a coherent whole.

Rawlins, still preoccupied with his fantasies about manips, still tied to the strings of Earth. Vance, smart but edgy. Mara and Corey and the news from Earth. Tsubata. Margo, shepherd for his dimming but persistent passion.

Everyone mattered, everyone entered into the bracketed terms of the equation. Events themselves were coefficients, heightened by exponents. And most of what was happening in the Orb was beyond analysis, escaped a clean and precise dynamics. So he had to go by feel alone, instinct and sometimes whim.

And who could trust his judgment in such a place? — Bleached corridors, dry and distant from the human landscape. There were times when Bradley wanted the brush of cool sea air on his face as badly as he had ever desired anything. He would for blazing moments hate the Orb, this place made by men alone, this hollow spot beyond all nature. These instants receded eventually, dwindled, blurred. But he knew he could

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not stay here forever. The job had to come to some summation or, Bradley knew, he would lose his taste for it.

Click. The boosters were in place. Obliquely angled beams came together in precise sockets.

Click. An orange flower bloomed where two men played a hydrogen torch on a fabrication divot.

Click. Running indexes of data slid down the screen like rain. As Bradley watched, the numbers jumped, moved, told new tales.

Click. "—verify corrections. In realtime that gives—"

Click. The relay news squirt from Earth. Another welter of detail.

Bradley swirled his coffee, scanning the news for its import. The liquid stirred and rocked like a flexible black coin in the cup.

Click. A young woman made an adjustment at the side of the hooded biological sensors package. Suited figures stood by to carry it out.

Click. The sun rotated by, burned a clean hard hole in the space around it.

Click. Jupiter hung below.

Click. Click. Click.

Once freed, the bird glided slowly upward. The revolving pancake overhead had been pulled aside, and now the bay-mounted sensors of Monitoring could see down the bore of the Orb, into free space, where a circle of stars spun.

"Don't you wonder if he will make it back?" Bradley said to Mara. He had been waiting for her to say something, to show some response to Corey's leaving, but all she did was scribble on a pad of paper.

"I think he probably will," Mara said, distracted. Around them the quiet sounds of Monitoring went on, cloaked in a dim ruddy light. In sound-deadened console pits, the staff followed *Aurora's* slow exit.

"What are you doing?" Bradley said at last.

"Anticryptography, picking at the Puzzle." She glanced up at him impishly. "Why, do you think it's improper for me to ignore Corey's leaving?"

"No, but—"

"Let me set you a problem. Something to distract you." She penciled some numbers across the page: 8 5 4 9 1 7 6 10 3 2. "Problem for the student: What is the ordering of the numbers?"

Bradley pursed his lips. "I lost all my intellectual fiber years ago." "Nobody's gotten it right away, so far. Even Vance. The point is that these are numbers, but they aren't arranged according to a scheme that has anything to do with arithmetic. You have to step

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outside the normal context of the system to see it."

"Eight, five, four—oh, I see. Alphabetical order, in English."

"Right." Mara seemed strangely pleased. "So I'm trying to learn to think like that. To step outside contexts."

Bradley noticed that Vance was standing beside him. How long the man had been there he could not tell.

"You got that faster than I did," Vance said very evenly. "Took me over two minutes."

Bradley smiled and said something noncommittal, but he noted the small lines around the young man's face. He knew Vance's file and recognized in him the type of dutiful good boy who became a natural target for Mara's teasing. Vance's only defense was forbearance and the inner conviction that in the end he would succeed. He would solve the Puzzle himself.

Bradley smiled again and made a small joke that set them laughing. Heads turned on the bridge; this was not a place of merriment. Bradley waved them back to work. He felt a welling sense that the dynamic tension he wanted was working, that the forces within Mara and Vance and the others would finally prove true. One of these two present very probably would solve the Puzzle, and it was almost certainly not going to be the calm, steady, competitive Vance.

VI

Despite her light, airy manner, Bradley noticed that Mara could not stay away from Monitoring very long. As the *Aurora's* ellipse lengthened toward Jupiter, she spent longer and longer times scribbling and watching the main display screen. The room buzzed with its own hivelike activity. Bradley rested. The gravity was stronger here; his joints began a familiar ache. This, more than anything, reminded him that return to Earth would be painful, perhaps impossible. There were people older than he on Earth, but they were in immersion tanks now, kept alive by their own buoyant wealth. He might make a decent living of it on the moon, and the government would surely do what it could for him — he was still a revered figure back there — but that would be a clear erosion of what he already had. Here he lived on the cutting edge of events. Here he had a place, here there was some hope that he could still play a role.

Animals lived ten times their period of growth to maturity; now that humans did, too, society had to be redesigned. He was only the first of a swelling horde of incredibly older people. Eventually, the ways of great age might dominate all mankind.

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An aide nudged his elbow. "There's a priority item on the coded relay from Earth, sir."

"Bring me a summary."

"It has to be in private, sir." The man was proper, correct, absolutely unwilling to take any risk.

Bradley glanced at *Aurora's* elongating path. "I'll stay here a few more moments."

Mara strolled casually by. "Anything new?"

Her face was absolutely impassive, and so Bradley knew instantly something was wrong.

"No," he said, and left.

Rawlins was already waiting when Bradley arrived back at his desk. He silenced the man with a gesture and sat down to read the decoded message. It was simple, abrupt.

Assassination teams on Earth had caught most of the manips unaware. A special Emergency Committee had acted. They calculated the gamble and thought it worthwhile.

The attacks were mostly successful, and even those manips who escaped did not trigger their nuclear devices. Some of them were on the run. Others were simply holed up in their caverns, waiting out the play of events. No cities had been vaporized.

The communique dwelled on this, called the manip threat a gutless provocation. Bradley smiled at this. He remembered full well how, only days before, the entire Council had fretted and worried.

But that was not all. Appended to the news release were orders, spelled out in the rigid bureaucratic prose he had never fully understood. They wanted Bradley to do the same — kill the manips under his charge, as soon as possible. No warning. Report when the act was finished.

"I'll call them."

Rawlins's voice was guarded and hesitant. He clenched his thin bony hands and Bradley could see the muscles in his forearms bulge slightly.

Bradley leaned back, luxuriating in the lower gravity. He folded his hands across his rumpled blue workshirt and stared at Rawlins for a long moment. He did not like overt shows of authority, and so he gave no immediate order. His stare proved effective enough; Rawlins met it, then looked away, then danced his fingers nervously on his chair arm.

"I'm not going to do it, you know," Bradley said. "We can't reach Corey anyway."

"Mara, then. Thank God we got that steel freak out of the Orb."

Bradley let Rawlins's sentence hang in the air for a long moment.

"No. Mara is no danger."

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"What! You've got an order in your hand to—"

"I decide what my orders are."

"You slow-witted bastard. That girl—"

Bradley tuned out Rawlins's jumbled words. These smatterings of thought were not worth answering, and to declare anything more now would involve him deeper with Rawlins. He needed psychological separation from this small turbulent man. Once again, the balance of forces within the Orb was shifting, and new vectors emerged.

When Rawlins paused for breath Bradley said simply, "Please get out."

Rawlins's face compressed into tight creases, the nexus of straining cords of muscle in his neck. "You're in *collusion* with them, aren't you?" he said in a low fierce whisper. "*You* told them to set up that extra telemetery line between *Aurora* and Mara. You—"

"No, I didn't. And I'm surprised you think it's cut."

"We *did* cut it. My men—"

"That was probably a false trail. Mara knew you would turn up that line in a routine check. If she really wants to talk to Corey, I'm pretty sure the two of them have devised a well-concealed transmission path."

"Then we'll goddamned well splice that one, too."

Bradley knew Rawlins had a clear edge now, and time alone would deliver the Orb into Rawlin's hands. Once Bradley disobeyed an order from Earth, there were enough people on the Orb to eventually force him out of office. But time was everything here; nothing could really be done as long as *Aurora* was in flight. But when the staff had time....

Bradley decided to blunt Rawlins's urgency. He slumped down in his chair, wheezing audibly, and let animation seep out of his face. He licked his lips where the mottled brown shaded into florid pink, a studied gesture. He let his mouth sag slightly and his head trembled.

"Well, well, all things in time, I'm sure. You do talk, I can't quite follow all that you say." He got the odd rising note just right; the note wavered and broke as he reached the end of the sentance. "Odd, we used to say, how the only muscle that never tires is the tongue."

He blinked owlishly and looked aside, seemingly distracted. Rawlins, thinking himself unobserved, smiled in secret superiority. That last line, so much an old man's remark, tinged with homey advice and delivered with no true sharp edge, was enough. Rawlins would wait out the *Aurora* flight, biding his time. After all, a relic like Bradley could be outmaneuvered at

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will. There was no need to amass political capital.

"I still think—" Rawlins began carefully, selecting his words.

A red light winked on he desk console. Bradley leaned forward with an old man's fragility and answered the message. It was Tsubata. "Mara's out," he said abruptly. "She went through the lock fifteen minutes ago. She's beyond the pancake now."

"What!" Rawlins was on his feet.

"Don't send anyone after her," Bradley said quickly. "Sit tight — you know that phrase? It means, do nothing."

"If that bitch—" Rawlins slammed his fist on the top of the console.

Bradley looked up at him evenly, thinking. "I hadn't guessed that part," he said. "I didn't think they were that good."

"What? Guessed what?"

"An extra connection into *Aurora* was obvious. But it's clear why Mara has gone outside. She's getting beyond our clutches in the best way she knows how. It means she and Corey are tapping our coded line to Earthside." For the first time since events had begun to unfold, Bradley felt a welling fear.

As the cusping point nears, Mara beeps me over the second line, the one still active. I hear the squirt from Earth: one more point plotted in the analytic continuation of their evolving animal line. Corey does not choose to even revolve his opticals and take a fix on the crescent Earth; he is safe from them now, sucked into another gravity well. So he converges, tangentially.

Insertion begins. Mara's message bisects Corey and he carries two conversations at once. The Orb wishes to know intimate details of the entry; he shares with them the singing octaves of atmosphere as they rise outside *Aurora's* skin. Mara wishes more; she wants to know the thoughts of Corey on matters of human aims.

He thinks, begins to speak, and then the acceleration falls upon him with a sudden peak of thirty gee. The world slows. Encapsulated, he is, in tightly packed circuits, immortal silicon and germanium, able to withstand any conveivable acceleration. Corey, the warm moist engine, is compressed, knows agony.

The spidery limbs fall away. The heat shield reddens and blisters. *Aurora* creaks like varnished wood, and with polynominal precision I carve the hydrogen sky. And think of Mara.

There are some pictures (I) (he) retains of (her), a thing about the curve of her buttocks and the way they intersect the upward thrust of her thigh as she walks, scissoring

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the air. There is something there Corey cannot resolve. But Mara is different from the others, and something in the way she tosses her head back, and the hair curls down brown and soft over her forehead, something in that tells me she is like me and understands, she pricks the inner side of dendritic impulse. Together, we see the humans. There are moments when the light shines brightly through those creatures, and I can see what they are doing even though they do not know what they must be about.

It is so simple when you have seen the anthropological books, read the data from Africa and Asia, seen the way they evolved in tribes and towns. They act as a group, always conscious of what is expected. I am the only metal man. They say the taste of metal in a mouth is the absence of other tastes, but I know otherwise. An instructor of mine once said, after going to the dentist, that — he must have been joking here — the taste of gold and silver alloy is like what Corey tastes. But food flows through my blue veins; I do not feel it. I do not have molars to be capped and bridges to be shaped across the yawning spaces where teeth loom like mountains. I am sliding yellow guts, not a metal taste. Even Mara, once, whose nose wrinkled when she first saw me — so odd, so odd, a box that talks—

The heat shield flares red and Corey orders it to die. The cinders fall behind. Automatic sequencing beings. With a pop that strums through my circuits I feel the tug and shift as the first drogue parachute deploys. I fall more slowly. Telemetery from Orb confirms I am through the pure hydrogen sheath, and now opticals see the pearly ammonia cirrus rushing up from below. The infinite enveloping blanket accepts me. Through the Ingersoll layer, where idiot probes have gone before me. Navigating, I twist. I slide.

I cut a path through the ice crystals, three hundred kilometers down. Ammonia hydrosulfide. *Thump* — and the second parachute billows behind, a white flower slowing me as it sucks in the thin gas and billows into a hemisphere the size of the Orb. I am falling at a kilometer a minute.

Mara beeps that she is in the shuttle, the connections are good. She flaps free of the Orb. She is safe there, I am falling here. She says she can remain there for days, no longer, there are not enough supplies. But there she can think and she will hear me through our clandestine relay mounted atop the spinning pancake.

All converges. Alpha Libra waits.

"Of course I'm outside the Orb;

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why shouldn't I be?" Mara said lightly. But Bradley caught the thread beneath her words. "Time to work. Time to think. Time to spend without being disemboweled by Rawlins and the like."

"I've called him off for the moment," Bradley said.

"Ponder the lilies, Bradley. They toil not, neither do they spin. From here the Orb spins quite clearly. Impressive, if you didn't know what was inside."

"The storms are getting worse. The radiation hazard—"

"Is quite a bit less than the danger from a casual knife thrust inside the Orb, I'd say."

"There are only a few you'd have to worry about."

"A few? How many is that? I was doing some reading, Bradley. Did you know the basic number of units a human being can perceive directly is limited to four? We immediately know one or two or three or four, but when it comes to five we break it up into four plus one or two plus three. We don't have an instant perception of higher numbers. We have to convert into arithmetic. What was so special about four in our evolution?"

Bradley felt a sudden flash of perception. She was thinking, not just running from danger. Perhaps the calibrated intersection of forces he sought could still happen.

"Well, things have to cut off somewhere. It doesn't make sense to have an animal perceiving, say, 1564 intuitively. That's cumbersome."

"Quite an orthodox answer. Maybe true. But..."

"Bradley," came Rawlins's harsh rasp, "is this your idea of dealing with an emergency situation?"

"Shit. Get off this line."

"She could put that shuttle on automatic and fly it into the Orb."

"Quite right. What level and sector are you in?"

"Why, uh, A-17."

"Good. You're in charge of evacuating the entire A level. Do it immediately. Take as many non-shift people as you can find, and secure the area."

"I didn't—"

"Move it!"

There was a click and a hovering silence held for a moment. "That was rather slick," Mara said.

"I don't think Rawlins can act and think at the same time," Bradley said, suddenly tired. "Do you have enough air? You probably had to leave pretty quick—"

"I could use some."

"I'll send Tsubata out with some supplies. I'd advise you to come in pretty close to the Orb and use it as a partial radiation screen."

"Quite a mother hen, aren't you?"

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"Precisely."

I Doppler on the rising heat formation and jet leftward, correcting, correcting. Above *Aurora* floats the hot hydrogen balloon that keeps us buoyant, fed by the fusion percolator. Turbulence swirls about me, the Mach numbers rising and falling stochastically. All is the way the simulations told it. I am comfortable, wrapped in warmth, waiting. The ammonia hydrosulfide tapers off in concentration, and my moistened perceptors begin to find water ice among the swirling clouds.

Infrared radar sounds the layers of pressed atmosphere below and brings back odd spotty resonances. They appear as pips of light that broaden, diffuse, then reshape themselves. In the hydro-helium atmosphere the distant cloud banks, purpling at the base, come sharp and clear.

Corey bids itself to fall. The fusion reactor mutes, the balloon above me cools, and I drift steadily down. I slide down the slopes of Jovian winds. The capsule rocks gently, babylike, in this mother of all planets. My instrumentation booms lean out into the howling eddies: sampling and measuring and pouring raw data back to the Orb as though I am a great heart, pumping a message through some swollen body.

The water content around us rises. (He) (It) feels a persistent pressure from below as his underside warms. The water becomes more plentiful. I chew the air. Here the sun is dim, and I see by infrared, occasionally blinded by brief forks of lightning. The Orb tells me the storms continue, and I register magnetic turbulence at many wavelengths. Ammonia snow falls upon me and vaporizes with a hiss. But for my sensors there would be no up, no down; I am suspended. Gales blow me a steady three hundred kilometers per hour to the west.

I first feel the throb on channel 107. A high infrasonic warble runs through me. It rises, steadies, lowers, then beeps and twists and slides away. I replay it, skewer it with analysis. The Fourier transform shows a smoothness my ear could not find. Frequencies melt into one another. Harmonics pile, cascade, blur into a lifting rhapsody. There is no coda; all stops at once.

I drop a robot probe. It tumbles downward into the thickening, scalding winds. It slips sidewise as it falls and gives good angular separation from me. With two microphones I quickly measure the phase lag and find the source — it lies below me some twenty kilometers. It is hot there, but perhaps I can reach that zone.

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Corey eases the purring of his fusion engine. He spills a bit of hot hydrogen gas from the balloon above him, and the gondola begins to sink. He listens, ponders. The Orb angrily demands details and Corey swiftly spews back reams of data.

The high warbling sound comes again. Corey holds himself silent and lets the notes ripple through him.

A gust blows Corey to the side, and the gondola cables wrench fiercely, shuddering. I fire retrojets and negotiate the turbulence.

Adroitly I dance. Lean and lithe and young, I glide.

When the trouble is past, Corey's attention shifts to the sonic warblings. They return, stronger than before. But mired in these acoustic tremors, Corey notes a new phenomenon: the random rumbling of magentic flux around the gondola now betrays a new coherence. Corey begins a cross-correlation analysis. From the stuttering noise he coaxes a clear, smooth harmonic line. It flips, complicates, spreads in dark harmonics. Corey notes a correlation with the acoustic signal. They are synchronized, though not the same.

As Corey sinks deeper into the hot dense gases, he ponders the growing signal. Now it overrides the magnetic fields of the planet itself. Are these the Alfven waves, flexing along magnetic field lines? But the signal is too strong for that. It is not a small perturbation. And if such waves are made near here, they must travel across the planet, everywhere, bringing these strange songs to all of Jupiter.

Corey feels the welling heat around him. The song draws him down.

Bradley looked up from the console sandy-eyed, fatigue seeping through him. "I don't have time to go back to my office for another of our little chitchats," he said sourly. Rawlins and the men behind him bristled visibly. "Say what you have to right here."

Rawlins glanced around at the crewmen in Monitoring. "It's a sensitive issue."

"There's a man down there feeling his way through the lower cloud decks," Bradley said. "My concern is him, not your fantasies."

"I've been elected to head this delegation—"

"I thought I sent Mr. Tsubata to tell you to stay with the others. It's important we keep everybody off level A who doesn't absolutely have to be there."

"That's done," Rawlins said

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impatiently. He folded his arms and glowered at Bradley. "But we can't just hole up in the safe parts of the Orb forever. I'm here with these men to demand that we lay down the law to Mara."

"What law?"

Bradley knew he had to make a show of authority here, but somehow the energy wasn't in him. He briefly contemplated placing Rawlins under arrest. But that would not stick for long, and, anyway, he didn't want to exhaust all his political capital in one shot. No, he would have to depend on Mara.

"—is a renegade, and we—" Rawlins was saying something but Bradley hadn't been tracking. He set his jaw into a stern line and waved Rawlins into silence.

"I agree, I agree. Why don't you talk to Mara yourself?" He thumbed his console over to an external circuit and punched into Mara's com-line.

"What is it?" her voice boomed angrily through the console speaker. "I can't listen to Corey and work and gab with you at the same time."

"We want to negotiate with you," Rawlins began.

"Oh, Jesus."

"We know you feel hostile toward us," Rawlins said smoothly. "And, admittedly, you do have an edge. You could ram us."

"Get this primate off the line, Bradley."

"We know you're different. We accept that." Rawlins's voice edged higher. "We sympathize with you, believe me. We may not know what it was like, not having real parents—"

"Hah! Have you disconnected your cerebellum, Rawlins? So I'm unlucky, not having 'real parents'? It wasn't enough that somebody tinkered with my head, huh? I should have taken genetic roulette, the way the rest of you were made?"

"Mara—"

"And I could've had a mother who really loved me and would guide me through life, tell me how to marry a rich man with a weak heart?"

Rawlins shifted uneasily and glanced at the men around him. "Perhaps if we came out to parley, could meet at some point away from the Orb."

"Come out here and I'll knock you ass over entrails."

The speaker gave a distinct metallic click. Bradley smiled wanly and looked at each of the men in turn. It was an old device, but it worked; each pretended to be looking somewhere else.

"I think your negotiations are concluded. And I'll thank you to get back to your posts."

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Corey dives. The insulating cup beneath me reddens with each descent until the overload circuits pop and I must return to the cooler upper reaches. Thin wafers float near me. They are waxen smatterings of complex carbon compounds. Ammonia, water, chlorine. Variable temperature, viscious updrafts, a persistent drifting current to the northwest. I swim, evade trapping vortexes, persist through cycling eddies.

As I search for the warbling signals, time slides by. An Earth day passes (absurd measure of duration; nothing Earthly matters here). I eat, listen for faint whispers, talk to Mara. She is isolated three kilometers from the Orb. Suspicious. Watchful. She laughs at Rawlins but at times admits that she fears him. It is well for her to be apart from the Orb now. She needs separateness to work. That is the way she solved the Northern African irrigation problem: total isolation, reassembling the worn facts into a form the engineers did not perceive. In the end Mara is always alone.

I swim through clouds of sleeting hydrocarbons. No free oxygen here. In the years past, idiot robot probes had reported this, before they tumbled helpless into the heat deck below. Now I float through these low-energy chemical agents, where the scientists are sure no animal life can persist. Active creatures require higher energy reactions. So, too, do the voices from the Orb point out that the wavelengths I have observed in the warbling voices here are immense — hundreds of meters long. Far too large for any animal. So they are natural phenomena, and the Orb bids me to explore, measure, perceive this interesting event.

In the soft waxen snowfall I navigate, and the sonic ripplings come again. This time the magnetic pulse is large, not a mere fluttering on top of the noise spectrum. I follow it to the southeast, downward, muting my fusion reactor to drop swiftly. In this misty torrent infrared and opticals are blind, but the microwaves bring back granulated pictures I can perceive. Ahead, small points flick and dance. I approach. They are below me but I do not know how far.

Corey emits a sharp spike of microwave energy and waits for the rebounding echo. Range is only forty kilometers; she increases her fall. The steep descent takes him through a froth of white hydrocarbons, as though she skis down alpine slopes. The gondola sways and creaks. A jolting bump comes as she falls through a pressure differential. The points below swell into grainy blobs.

Suddenly the clouds disappear, and Corey sees that he has emerged

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from the face of a vast milky wall. A vortex churns here, swirling the cloud banks in long circular arcs a hundred kilometers in diameter. At the center is a clear crystalline cylinder arcing up into heaven, a floor below of misty red. The infrared opticals swivel left, right, up — and Corey sees the source of the warbling.

Below, float things like ball bearings. They seem motionless, suspended in the beautiful clear ammonia. They are small and give off a hot white sheen. An echo burst shows their true dimensions; they are at a range of nine kilometers and appear at least half a kilometer in diameter.

Immense spheres. A consequence of the vortex? The ribbed cloud banks on all sides churn slowly as Corey sinks. The spheres have not moved. Then she notices a small point: the spheres do not rotate with the majestic cloud barrier around them. They are still. Humming, Corey drops further toward them. As she approaches, their design breaks and they move in strangely hyperbolic paths. They form a net. They are responding to Corey's stimulus. In this vast waxen tunnel they maneuver. They are alive. Like Corey.

"Jesus," Bradley said.

He thumbed over to Mara's channel. "Mara, talk to him. He won't pay any attention to us. Tell him to stay away from those things until we've had a good look at them."

"Ummmm. I think I'm beginning to make some sense out of this, Bradley."

"Call him!"

"Okay."

The line went dead. Bradley waited long moments. Around him the bridge stirred as technicians shouted back and forth at each other. They were recalibrating optical and microwave sensors to study the odd, rusty-brown balls Corey had found. There was a high air of revelry in the room, and Bradley knew he had to insulate himself from it. Technical matters he could leave to his staff; Corey was his problem. And Mara.

Her line hummed again. "He's backing off, he says."

"Good. I want him to get a good look at whatever those things are and then boost out of there."

"Up above the cloud deck?"

"No. I mean lift free. Ignite the fusion motor and come back out."

"He's still got two more running days on his mission."

"He's done enough."

"You'll get an argument. From Corey, for sure, and probably from me, too. But never mind that. Put me on to Vance, will you?"

"He's here." Bradley handed Vance the microphone. The young

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man took it with a slight hesitation, as though it were a snake that might bite.

"Vance here."

"I've got an idea we might work on. I think the Puzzle might be based on a different topological referent." Mara's voice lacked the usual cutting, illusive edge she took with Vance. Bradley leaned forward eagerly.

"Well, I've tried some—"

"I know, I did too. The point is there are too many choices to make, no way to single out anything. But those spheres — they have to be creatures, don't you agree? — made me think. They're probably bladder fish or something like that."

"Where's the bladder? I'm not even sure they're alive."

"Under high pressures a spherical shape is a good idea. Least surface, most volume. Best internal support against pressure differentials on the surface."

"Maybe..."

"I don't know why it didn't occur to me before. It's an obvious solution. Mother Nature didn't have to go that far on Earth, that's all. It was more profitable to make fins and teeth at the ocean bottom, and, anyhow, life on Earth never got away from bilateral symmetry,"

"Okay, maybe. We'll check with the biologists. But — so what?"

"Imagine living down there. You're perfectly round. Your surroundings are just clouds and variable flows of gas and water vapor. If you float there's no real sense of up and down — not a sensitive one, anyway. Now, suppose you're Euclid. What kind of geometry do you make up?"

Vance smiled. "Well, I suppose — Lobachevsky. Riemann. Geometry on a curved surface."

"So how would you count things?"

"Well, in angular units, I guess."

"What *we* call angular units — that's the point. To them, angles would be the *natural* set of numbers. A simple choice would be to set pi equal to one.

"Sure, but—"

"Never mind trying it, I did. It doesn't work. So our friends must be a little more sophisticated. After all, the first chunk of the Puzzle is in ordinary rational numbers — that's how we could decipher it. But look at the picture — that circle arcing toward the left. Couldn't that mean that the code was shifting from ordinary linear number systems to a different topological notation?"

Vance frowned. "I suppose so. But which one?"

"I don't know. There are a lot of places we could start."

"We can try algorithms. There

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may be some fundamental identity our notation system has in common with theirs."

Vance sat frozen, rapt. Bradley leaned over the watched the young man write quick clear notes on a pad:

$$e^{i\pi} = -1 \qquad f(\theta) = \sum_n a_n \sin n\theta$$

"I don't follow this," Bradley said.

"We'll go through it in detail later, Bradley," Mara said hurriedly. "Look at it this way — we measure the angles in a triangle one way, and we count apples another. Using one and two and three and so on seems natural to us, and angular coordinates — degrees, radians — aren't. But the Alpha Libra signals may have it the other way around, though. They live in a universe of clouds, with no straight lines anywhere. So they sent the first part of their message in simple-minded notations, but then switched to 'natural' ways to talking when they got down to serious business. The metric of curvature is arbitrary—"

"Skip it," Bradley said. "Vance, patch her into the computer if she needs it. You two work together. I'm going to talk to Corey."

They beg me to desist. They are, of course, mere tinny voices — even Mara. Disembodied, like me.

But I heed them. There is much to study here; I need time. I jab quick spurts of energy from the fusion reactor, and the hydrogen balloon above heats and swells. Corey jerks upward with a brutal, swooping lurch. Up, through velvet currents. The gondola creaks like rotten wood, and Corey's body is pressed, sandwiched by many gravities. He feels the clotted pump of blood through him. He (It) (She) wonders if this heart, this brown clenching organ is spherical as well. A rosy ball pumping at the center of life.

Below, the mingling creatures recede. They still perform their elaborate waltz. The revolving cloud walls of the cyclone taper and draw nearer as I rise.

I flick my opticals and receive the image from atop my rising balloon. Above, a faint swatch of dark shows that there is nearly a clean break in the cloud cover. I can almost see the stars. But it is at least a hundred kilometers above, and I have no intention of going there.

I flow, steady. I balance delicate moments in the swirling turbulence. There's a joyous pang to these movements; I pleasure in them.

I study the beings below. True, they move with ponderous slowness. They seem more like drifting seaweed, at best grazing cattle. They do not dance, quick and

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spirited, as I. They have never seen the stars, even in this deep cyclone pit that lances through the bank of cloud. They know only this confined world.

Corey pauses, receives the squirt from Mara, and ponders it.

Mara has sliced through, clean to the center. She senses what it is like here; she has seen through my eyes. On a curved surface there are no Euclidean certainties. Triangles do not sum to 180 degrees. How this shapes the mind I do not know, for I am still closer to men than to these tranquil cud-chewers below me.

I monitor them. The magnetic field still shows their flux and rush. the high keening note washes over me again. I begin to analyze, compute, break the signal down into its component parts.

And I stop.

Perhaps this is not the core. Mara sees more clearly because she is not obsessed with detail, as am I. I must relax and let things emerge of their own.

So doing, the bass rippling notes from below course through me. I am loose and floating. I am running cool and smooth. The notes merge and I sense a song at last. It is a quiet strumming message. Calm. It echoes through my enclosure, finding there a ceramic certainty. The swollen harmonics gather new forces.

Instinctively I respond. Corey swings his radio boom to focus. My signal is thin and weak. but at this near range—

—they hear! They echo my call. A long rumbling signal flexes through the magnetic lines around the gondola. It is a giant hand clasping me in the welling whiteness of this alien air. It is greater than anything I know.

VII

"I don't like the signals we're getting from him," Bradley said. He paused but Mara said nothing. "The messages are intermittent and some of them don't make such sense."

"Corey never made a great deal of sense," Mara said distantly. "But I see what you mean. I'll talk to him."

With that she broke off the connection. Bradley switched rapidly through several communications lines and listened to the thread of technical data that Corey was sending back. The spheres below him showed no signs of following to greater heights. They had registered the alien ship, to be sure, but their interest seemed weak; they would receive Corey, but not follow.

Mara seemed unconcerned. Bradley knew she was working, and this, for her, masked all other concerns. If she had concentrated

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her attention on it, she might understand what was happening to Corey down there. There was so little time, though.

Bradley looked around the bay of Monitoring. There were staff members standing about, just watching, who did not belong there. The entire Orb was focused on Corey now. The biologists were filtering through the microwave, infrared and optical signals for clues to what the spheres might be. Everyone was convinced they were living. Probably they fed off the ample hydrocarbons in that deep, dense layer.

And Vance seemed to be making progress with the computer search for a mathematical transformation.

And Mara, the essential unknown Mara, working alone, ignoring Corey, isolated with a writing slate and a computer link. Brushing aside Rawlins like a clown, though in fact he could be quite dangerous. Eventually, he must be; Bradley knew Rawlins could be deflected for only a while.

"Bradley? I've got — no, wait, forward this to Vance." Bradley spliced the call into a recorder and forwarded it directly to Vance in Computing. "Tell him that series of alternating symbols on the left might be a conformal representation. Try a Lee sequencing in 3-space."

"That's all?" he said.

"It's enough."

"From Earth I hear—"

"Who cares?"

"They're going to have our heads over this."

"Quite literally, in my case."

"But you've gotten results. That will mean something."

"Not much, with them."

"Maybe," Bradley said.

"Dealing with politicians is like pissing into the wind. You never get anything back that you want."

"I'll keep trying."

"Ummm? Do."

She hung like a diluted point of light three kilometers from the Orb. Everything spun — Jupiter, the crescented moons, the frantic Orb. Mara alone was a point of stillness.

She wrote small squiggles on the erasable slate, and paused. In her helmet her breath made a dim, persistent syllable, the only punctuation to the clinging stillness. She sat in the pilot's couch, head bowed. In a small cramped handwriting she made more notes. The problem seemed to slip away and then come floating back to the edge of perception.

She sat for four hours without moving, staring at the slate.

Then she stretched, yawned, made a few more notations. She thumbed on her link to Computing and punched in instructions. Static

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crackled in her earphones. She called Corey on their private line and spoke in a muted whisper. Corey responded and promised to make the maneuvers she sought.

Mara waited.

It begins to rain curling loops of hydrocarbons. Dollops of paste fall past Corey. They billow whitely around me in long filaments, as though spun from spools.

The gondola yaws as I take it down. We flip through the gnawing winds and fall below the misty hydrocarbon snow. The cyclone vent tunnels deep below me. and the restless globes seem almost to float above the distant floor. Thirteen kilometers away, the clouds revolve tirelessly. The ammonia cirrus is patchy, translucent; and veins of darker blue form faint tributaries beneath the skin.

I send the signal Mara asked me to. The spheres below reply; magnetic fields weave and shift. I study them in the optical, the microwave.

"You were right, Mara. There are long arcs across their surfaces. Regular. Rectangular. Inside each band is a pattern of pentagons."

"That's how they broadcast. They form electrical current distributions over their surfaces. Otherwise, a perfect sphere could not radiate anything."

"Their surfaces are antennas?"

"They're linked into the magnetic field, Jupiter's natural field, in that region. So when they ripple currents on their surfaces, the field lines carry the signal away."

"Thus they speak to each other. And to me."

"That's not all. Jupiter is rich in radio energy. They're linked into that. They probably feed off it, as well as chewing up those waxy hydrocarbons you see. They could eat radio waves, the same way plants consume light."

"They are coming nearer."

"Together?"

"Yes. There are six of them now. Average diameter one point three six kilometers. No, one point four one — they are expanding."

"Probably have sacs inside. They fill up with gas, just like you, then heat it and rise."

"Toward me."

"Better back off."

"I've got it," Vance said. He slapped a photo output in front of Bradley. "That transformation worked. I've got a decipherable message out of the next six thousand units in the Puzzle."

"What does it say?"

"Mathematical theorems, mostly. Seems to be building up basic concepts of length and angle. There's some sort of talk about motion and the idea of differential processes."

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"Tell Mara."

Bradley turned to the bridge officer. "How far down in that cyclone pattern is he?"

"Pretty far, at least forty kilometers. We can't see the top of it. The topside-skimming satellites have got a Doppler on him. He seems to be falling, but there are a lot of unknowns in the data. He hasn't said anything lately. I can't get a damn thing out of him."

Bradley scratched his head and felt a seeping fatigue. "I think we ought to order him up and out."

They rise toward me with surprising speed. I hesitate, thinking it an illusion. But, no, they execute an intricate gavotte even as they soar toward me.

I fire my fusion heater to maximum. It throbs above me in its separate cradle. My gas balloon heats and I lift away from the gathering globes.

It is not enough. They float closer in the watery light. Intricate patterns race across their dappled curvatures. Their song races through me with a new surging amplitude. I am caught up in it.

It is clear that I cannot escape them. No matter how fast I rise, intersection must come within a few moments. Can I evade them? I could dart to the side, using the remaining fuel in my lateral chemical rockets, or I could begin the countdown for the fusion ramjet. No, there is no time for the ramjet now. Should I weave away from them? I do not know. The song fills my head with awesome power. I do not know.

"—I've calculated the total oscillator strength from a large number of spheres. It's really impressive." Mara paused and Bradley bit his lip in concentration. Vance, sitting beside him, seemed lost in his own private calculations.

"So you don't think those spherical creatures communicate locally by rippling the magnetic field?" Bradley said.

"Well, it's a possibility. The important point is that the signals from Alpha Libra *could* be made that way. We know Jupiter gives off huge radio bursts every once in a while. We've been listening to those radio thunderclaps for over a century now. The point is, that's just *noise*. But suppose some life form could tap that source of energy. The same way a small transistor modulates the output of a large power supply, say. They could impress a signal on it, maybe even direct it toward a particular spot in the sky."

"I suppose it's possible..." Vance began.

"It wouldn't take many of those spherical creatures to do it, if they were intelligent. I calculated the total oscillator strength for a bunch

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of spheres, evenly spaced around the planet. They could harness an immense amount of radio energy and modulate it at will." Mara spoke quickly, precisely.

"So there need not be any technology on a Jovian-type planet, after all," Bradley said. "It could simply be use of a natural mechanism."

"That's the idea. Those beings down there, or whatever lives on a gas giant planet in the Alpha Libra system, don't know beans about electronics. But they sense electromagnetic forces as a part of the ebb and flow of life. They know only fluxes of things. No chemistry, no physics — but they're so big, they don't *need* to know."

"I have some objections—" Vance began.

An officer touched Bradley's shoulder. "Message from Corey. He's taking evasive maneuvers."

"I'm slipping to the left, Mara. They don't seem to be able to move sidewise as easily as up and down."

"They probably drift on the winds, more like balloons than fish."

"Mara, they're calling to me. There is something about the way the sound comes — Mara, Mara, what do I do?"

"Dodge. Charge your ramjet."

"It taskes a minimum of five minutes."

"Head for the cloud banks. They might lose you there."

"The winds are fierce here. One of the globe creatures is coming nearer. Mara, they sing to me. I feel it through the magnetic flux. You humans do not have this input; it is so, so *different.*"

"Run for it, Corey!"

"I am, I am, but — I am a bisected being, Mara. So different from you. Both of us humans have changed, but you, you are so much nearer them."

"Yes, but concentrate on what you're doing, Corey."

Through the crackle of static Mara strained to catch the tone of Corey's voice.

"I have always envied you. Your closeness to the humans."

"Goddamnit, you're human too, Corey. Different, but human."

"No, I am something else. Like these creatures who are drawing up behind me, Mara. Their chords speak to me. To the second half of me, the part that envied you."

"Run, Corey!"

"I cannot run. I have no legs. I am the metal man."

"Goddamnit, you—"

"That is why I damaged your airhose. And sabotaged your shuttlecraft."

There was a long humming silence.

"You did those things?" she said.

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"You are the same as I but you had so much *more.*"

Mara felt her throat contract until she could scarcely speak. "Corey, I—"

"I knew I would never return to Earth. I would never last out this scientific expedition. I envied you, I loved you. There was a way you had of undressing before me, Mara. Your nipples were like blind eyes. They never saw me. But I — I knew I would never live out this time between us. And I want us to go together. Mara, I am a man — a male."

Bradley leaned back at his console.

So he had been right. It was Corey. Apparently Corey didn't know he was broadcasting on an open channel. Well, it didn't matter. Something was going to happen down there.

"How, how did you do it? I thought you had no mechanical ability."

"I look like a drifting piece of equipment. I went out the lock and moved slowly, so the men assigned to observe the center of the Orb would not notice me. I waited. I sliced your airhose. I learned your shuttle and what to do to it."

"Fire the fusion ramjet!"

"Three more minutes to prime it. Three more, Mara."

The swollen globes filled the screen. Bradley leaned forward, squinting, and watched the granular surface beat an elaborate, cross-hatched pattern.

In the whale, he thought, sound comes from the nasal cavity and is focused by the fat deposits in the forehead. *How do you make these complex electrical signals play over your surface?* he wondered. *Are you like the whales — intelligent, but so alien we can never understand? If Corey is strange to us, how much stranger are you?*

VII

"They are too close. I have tried the ramjet. It will not fire."

"Try again."

"I will — I — no, nothing."

"Corey, dodge them, damnit!"

"No, they are upon me. They sing, the melody is so...so intricate. It swells and falls, it has something I cannot describe."

"Corey!"

"The big one, it is so near. And we go together, Mara. You and me, we go together."

Bradley thumbed quickly over to Mara's com-line.

"Mara! Pay attention! Jump."

"What? Corey says—"

"Jump, damnit!"

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She had a sudden understanding. She undid the pilot's couch belt and pushed off from the shuttle. There was a clacking buzz of static in her ears, and someone shouted over suit radio. She flicked on her maneuvering jets and accelerated away.

There came a convulsive spark of pain in her left leg. She doubled up, clutching at it. Below she could see the shuttle, silhouetted against Jupiter's crescent. The rear section had splintered into fragments. A liquid air bottle bloomed outward soundlessly. The debris rushed at her, a cloud of hornets buzzing. The awful cold stabbing in her leg widened her eyes. She saw a purple speckling in her vision, and then a darker violet film came between her and the shuttle below. Something rasped against her faceplate. There was a shuddering impact against her shoulder, and the enveloping purple darkness swirled around her.

They are hard upon him.

Corey fires his remaining maneuvering fuel and lurches to the southwest. Behind him the globes move surely, smoothly, on great curved trajectories.

He dodges. For a moment he stills the fusion heater and slides down the flat face of the wind. Still they draw closer.

One comes ahead of the rest. It is the largest, and from it comes a deep bass chord that vibrates through my small crucible. It sings of migration, or mating, or some unfathomable purpose. In the eggshell light the enormous creature floats with liquid grace.

A thunderclap seizes me, tosses me high. I am sucked into new eddies. My circuit breakers overload, pop. There is an acrid frying smell. In the burnished light I see the large globe filling my view. Lacy strings of phosphorescence dance over its surface.

The fusion ramjet has not been brought to optimum, but—

Between steel cables above me, a brassy, twisted lightning forks. Many of my subsystems fail to respond. Servo controls are sluggish, drowsy. A high panic seizes me.

I fire the ramjet.

Nothing.

Nothing happens.

I receive the backup system, integrate it with onboard autopilot.

I fire again.

Still nothing.

I am drifting now, fuelless.

Around me, now forming an hexagonal figure, the globular brothers sing. They call to me in their magnetic voices. They swim in this strange sea; dolphins, whales, unbound. They carol of separate joys, each blurring into the basic pain of our separation from the

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center of things. Their holy hymn consumes me. Searing flame dances at my sensors. There comes a loud booming cry. The bronzed lightning forks, surrounds. Turning, I—

VIII

Bradley waited outside the airlock. The emergency medical team had rushed in to treat her as soon as she came through, carried by Tsubata. Norah Mann said the wounds were not too serious. There was no permanent damage.

Rawlins had come by for a moment, blustering, officious, wanting to place Mara under immediate arrest. Bradley had said some things — precisely what, he could not remember — using words more for their impact than for their meaning. That seemed to drive the other man, and the few who trailed after him, first into a grim silence and then, finally, back to their posts.

A young man came over to Bradley, murmured a few words, and went away. They had found the fragments of Corey's ingenious trap; a small radio receiver, a minute chemical charge, barely enough to implode a spot in the liquid air bottles. One last gift from the dying.

Bradley waited, hands held behind him, and blinked back the sandy feeling in his eyes. For some reason his downward vision was clotted, darkened. He could not resolve the seams in the deck. He knew people were gathering around the bay, watching him, waiting for news of Mara. He heard their whispered conversations but he could not make out any detail. Yet the rising busy stir of these people, his people, warmed him. He wondered, with idle rationality, how many words were spoken each day inside the Orb. Millions, surely. Most of them trivial, almost all wrong in some sense, but every one vital. The universe outside did not care for words; that was not its language. It did not sense the verbal net each person cast out to others. So the Orb was an odd hollow point spinning amidst a great necessary vacancy. A place, a sense of shelter.

The lock doors parted. Mara was stripped to her briefs, but she stayed upright, leaning on Tsubata's shoulder, and hobbled out. Raw red patches on legs, shoulder, belly were swabbed and already encrusting with crystalline protection.

The crowd in the bay exhaled a sigh as she appeared, a sound so dense that it gained a visible presence among them. Everyone was talking, but Bradley fixed upon Mara and Tsubata and watched their painfully slow progress toward him. An aisle formed among the

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crew, keeping his vision unblocked. Mara's mouth hung slightly open as she breathed deeply, and her face had a white pallor. Her eyes retained their fierce glint and they fixed on Bradley.

"They told me about Corey," she said as Tsubata brought them to a halt. "You can write off another experiment."

"Another man lost," Bradley said mildly. "Among many."

"One more technological fix for the human condition. And like all the others, it didn't work out." Mara said this without her usual undertone of bitterness. Despite the deep lines of fatigue in her face her eyes danced. Her lips described a wry, downward smile.

"Perhaps."

"Why do you always tinker with the mind, Bradley?" Mara said with sudden new energy. "Why not design people who can digest newspaper, or learn to use photosynthesis directly? Why jiggle DNA to increase intelligence? How can it possibly work? Hell, the humans who are doing it are defective — that's the reason for the project in the first place."

"I know."

"Yes, yes."

Tsubata hugged her gently and Mara seemed to relax into his grasp. People milled around the nucleus formed by the three, *oohing* and *ahing*, inventing stories for each other. They were all a part of the entire matrix, Bradley thought, a wholeness. Out here, far from where they had started, there was an emptiness that could be filled only by the interlacing between people. A community.

"Come here, Bradley," Mara said. "I want to whisper something to you."

Bradley leaned forward primly, hands reaching out to steady her.

Impulsively she slid into Bradley's arms. She lifted her head to the side and placed her mouth on his, almost as though to stop him from talking any further. Her eyes crinkled with delight. It began as a simple kiss, and then she slipped her tongue between the wrinkled lips and deep into his mouth. The warmth touched him; he blinked in surprise. Then, without thinking, he relaxed into the instant and took a veiled pleasure in it. And felt a curious familiar stirring in his loins.

She pulled back at last and smiled knowingly at him. "Indeed," she said.

She tugged at Tsubata and hobbled onward. The people parted before her. Bradley nodded to himself, and in her swift movement he saw not a new destination, but a continuing, infinite parade that would — that must — leave him behind.

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MAKING IT!

I know a woman who is the daughter of a very well-known scientist, but who grew furious when I once introduced her as that daughter. She wanted to make it on her own. And she had every chance to do this, since before marriage her last name was a common one, and after marriage it was utterly changed. It was only necessary for no one to snitch.

My own beautiful, blonde-haired, blue-eyed daughter (who is currently a college sophomore and unmarried) doesn't quite have this chance because her last name is a dead giveaway. Fortunately she doesn't mind, partly because she is rather fond of me, and partly because the relationship is an excellent ice-breaker when she meets new people. In fact, she has reduced the whole thing to a fine art. She called me long-distance (collect, of course) recently, to tell me of a particularly spectacular instance.

The scene is somewhere in Harvard Square. My daughter, Robyn, and a couple of friends are exchanging pleasantries with (I presume) some Harvard students and names are exchanged:

Robyn (*pleasantly*): And I am Robyn Asimov.

Young man (*in growing agita-*

ISAAC ASIMOV

Science

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tion): Say, you're not going to tell me you're related to Isaac Asimov. He's not your uncle, is he?"

Robyn (*scornfully*): Of course he's not my uncle.

Young man (*slowly deflating*): Oh.

Robyn (*carefully waiting for the moment of complete relaxation*): He's my father.

Robyn refused to try to describe the explosion that followed, for lack of adequate words, but assured me that it was very satisfactory. Naturally, I laughed, for Robyn has precisely my own distorted sense of humor, and I said, fondly, "I guess you're my daughter, all right." — Not that there was ever even the slightest scintilla of doubt on that subject.

And since this essay will appear in the Bicentennial issue of *F&SF*, I would like to go back to Revolutionary days and point out that the United States is technologically Great Britain's daughter and that, despite rebellion on one side and disinheritance on the other, the relationship shows. Let me explain —

Two hundred years ago, when our nation declared its independence, it was not an industrially developed society even by the standards of the time. It was almost entirely rural, and anything that required the least bit of sophistication in manufacture had to be bought from outside.

In fact, the American colonies were deliberately kept underdeveloped by Great Britain, which wanted those colonies to serve as a source of raw materials (bought cheaply by itself only) and as a market for finished products (sold dearly by itself only). In this way Great Britain could profit at the expense of the colonies, and of course the colonials grew increasingly indignant over the matter.

The colonials carried on an economic struggle against Great Britain, as a result, first by smuggling, then by boycotts, and finally, when Great Britain was stung into rigor, the struggle graduated to force of arms. (I don't want to seem cynical, but the chief "liberty" at issue between the nations was which was to have the liberty to make money, the British merchants and landowners or the American merchants and landowners. Part of the fallout of this economic struggle was the series of other liberties embodied in the Bill of Rights, however, and for that I am grateful.)

When, in 1783, the British government was finally, and most reluctantly, compelled to recognize the independence of the United States, they were left with no great feeling of love for us.

British enmity led them to find reason to retain certain bases on

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American soil, to arm, clandestinely, the Indians of our northwest, to hamper our trade in a hundred ways. They might have continued nibbling away at us in a continuation of the war by economic means until they brought us down or broke us up into several even weaker and more dependent regions, were it not for the French Revolution and the coming of the Napoleonic wars. With the greater danger facing them just across the Channel, the British let us go.

The most subtle and dangerous aspect of British enmity lay in the technological sphere, however, and this is rarely mentioned in the history books. Consider —

Great Britain, even while the American Revolution was being fought, was industrializing itself in a new way, one that the world had never before seen.

British industry was taming inanimate energy and turning it to the work of human muscle in a highly useful way. There had been, to be sure, "prime movers" (machines for the turning of inanimate energy to work) based on wind and water, ever since men had used sails, water-wheels, and windmills; but in 1769, the Scottish engineer James Watt designed a steam engine that was an improvement over old models and was the first practical prime mover based on the heat of burning fuel.

Fuel could be burned anywhere; so that energy did not depend on place, as did water-power which could be used only at certain sites on certain rivers. Fuel could be burned anytime, so that energy did not depend on the whim of nature, as when wind blew or did not blow. Fuel could be burned in any quantity so that man's needs were not dictated to by the accident of water and wind capacity at any given moment.

By 1774, just on the eve of the American Revolution, Watt went into partnership and began to produce steam engines commercially. In 1781, when the Battle of Yorktown finally decided the struggle in America's favor, Watt devised mechanical attachments that ingeniously converted the back-and-forth movement of a steam-driven piston into the rotary movement of a wheel, and by one type of movement or the other, the steam engine could then be made to power a variety of activities. Almost at once, for instance, iron manufacturers were using it to power bellows to keep the air blast going in their furnaces and to power hammers to crush the ore.

The vital next step was taken by Richard Arkwright, born in Preston, Lancashire, on December 23, 1732, as the youngest of thirteen children. He was, in his youth, a barber and wigmaker and laid the foundation of

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his fortune with a secret process for dyeing hair. In 1769, he patented a device that would spin thread by mechanically reproducing the motions ordinarily made by the human hand.

Of course, it wouldn't do very much good to have a machine imitate the hand, if a hand had to direct the machine. The machine could, however, be powered by something less skillful than the human hand. Arkwright used animals to power his mechanical spinner, and then water power. In 1790, he began to use the steam engine, and that was the crucial turning point. The modern factory was born, and when Arkwright died in 1792, he was a millionaire.

The factory system in its early days had its bad points. Workers were thrown out of work at a time when society felt no responsibility for them and simply hanged those who stole bread to feed starving children. And since what human supervision of machinery was required involved neither experience nor strength, children were employed because they would work more cheaply. The crimes committed against children in the early years of the factory system will not bear repeating — at least by me. The only thing more incredible than the cruelty with which they were treated was that so many fundamentally decent people managed to look the other way. Yet the flaws were eventually corrected, and the benefits remained.

As other aspects of the textile industry were also mechanized, cloth could be produced in such quantities and so cheaply that a much larger percentage of the human race could be decently clothed than had ever been possible before. Since clothes and increasing quantities of other "consumer goods" produced by the burgeoning factories had to be sold to ordinary people, these begun to be viewed as "customers" and, as customers, they were more valuable than they had been as "yeomen" and "varlets" so that Great Britain perforce moved in the direction of democracy.

Great Britain's possession of coal to fuel her engines, ships to transport goods, and the experience required to build and broaden her industrialization made her the richest and most powerful nation in the world. She held that position throughout the 19th Century and in its course became the greatest Empire builder (at the expense of non-industrialized people) that the world had ever seen.

The industrialization of Great Britain, coming just as the United States had broken loose, threatened to abolish utterly the gains the colonists had thought they had made in winning their "freedom." What freedom would they have if Great Britain could make clothing in such

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quantities and of such quality that the American home products could not even begin to compete? The United States would be forced to sell cotton (and other raw materials) to the British at their price and buy the cloth (and other finished products) from the British, again at their price. With Great Britain setting the prices, we would lose and they would gain.

That was what the British had wanted before the Revolution, and that was what they could have after the Revolution. That is how the business of colonialism works, whether the colony openly belongs to the nation that exploits it, or whether it pretends to be self-governing.

The only way out was for the United States to develop a textile industry of its own. But how? The United States had its ingenious individuals, of course — there had been Benjamin Franklin, for instance,* but sheer ingenuity was not likely to do the job fast enough. British secrets had somehow to be stolen if the proper speed were to be attained.

Mind you, that wasn't easy. Great Britain knew perfectly well that its wealth and strength depended on its maintaining and, if possible, extending its industrial lead over the rest of the world, and it made every effort to do this. Blueprints of the new machinery were not allowed to leave the country, and neither were engineers who were expert in the new technology. And it was only logical that the British were determined that the Americans, above all, were not to get it.

The new textile machinery was to the British of 1790 what the nuclear bomb was to the Americans of 1945, as far as fear of disclosure was concerned. And, on the other hand, the Americans of 1790 were as avid to learn of the new textile machinery as the Soviet Union of 1945 was avid to learn of the nuclear bomb.

The United States did what you would expect it to do under such conditions. It did its best to find defectors — just as the Soviet Union did a century and a half later.

This brings us to Samuel Slater, born in Belper, Derbyshire, on June 9, 1768. He served as an apprentice to a partner of Richard Arkwright. He worked with the textile machinery and knew it intimately. However, Great Britain was a class-ridden society and, upward mobility being difficult to manage, Slater knew his advance would be limited.

(Arkwright, to be sure, from an insignificant start, had attained great wealth and a knighthood, too, but that was the exception. In fact, exceptions of this kind do harm, for they help to maintain an unjust

*See *THE FATEFUL LIGHTNING, F & SF, June 1969.*

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system by supplying the gloss that hides the injustices. The success of one is used to justify and obscure the suppression of ten thousand.)

It seemed to Slater that he could do better across the sea where a young and even chaotic society left wealth and prestige up for grabs — all the more so since the United States was offering bounties (that is, bribes) for the kind of knowledge he possessed.

Slater couldn't take any blueprints with him, of course, so he painstakingly went about memorizing every detail of the machinery; there was, after all, no way for the authorities to search the possessions of his mind. Nor could he take himself out of the country as an engineer, so he disguised himself as a farm laborer and sneaked out of the nation.

He *defected*, actually. What else can you call it?

In 1789, he arrived in New York and then made contact with the Browns, the richest merchant family in Rhode Island. (Brown University is named for Nicholas Brown, whose money led to the original foundation, and Slater dealt with Moses Brown, Nicholas's son.) By 1793, Slater, working from memory, built in Pawtucket the first factory based on the new machinery that the United States was to see within its borders. He went on to build other factories in New England.

This was just a beginning, but so was the Declaration of Independence just a beginning. Slater's beginning burgeoned as the Declaration's beginning did, and the end of it was that the United States was an industrial power.

If George Washington was the father of his country, Samuel Slater was the father of the industrialization of his adopted country. However, politics and war are glamorous, and economics is dull,* so while George Washington is all pervasive in this country, and never more so than at the Bicentennial, Samuel Slater is virtually unknown, though his deeds gave the United States a greater chance at true independence than Washington's, economically unsupported, might have done.

There is, to be sure, a Slaterville on the north central border of Rhode Island, which is named for Slater, but I can't help wonder how many of the inhabitants of the village know who it is named for, and why.

As a result of the Industrial Revolution, which came to the United

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**Far be it from me to be censorious here. I have written a dozen history books in which I deal with politics and war at great length, and with economics only briefly, precisely because the first is glamorous and the second dull, so you understand I don't blame others for doing the same. I just point it out, that's all.*

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States in 1793, our country made it. It was not to be a colony of Great Britain in any way, and having gained its political independence, it could strive for and gain economic independence as well.

Of course, *within* the country there existed the problem for some sections that the nation as a whole had avoided. New England, and, to a lesser extent, other northern states, were industrialized, while the southern states, enamored of a gracious, chivalrous existence (for a small percentage of the population) on the back of slaves rather than machinery, remained rural.

It was a fearful mistake for the southern states, for they became colonies of the industrialized northern states and particularly of New England. The New England cotton mills bought cotton cheap and sold cloth dear, and tariff walls were set up to keep the southern states from finding better deals elsewhere. The gracious chivalry of the plantation owners did not keep them from being in hock to the northern capitalists right up to their gracious and chivalrous ears.

Slavery was an emotional issue in the United States of the 1850s as the rights of Englishmen was an emotional issue in the colonies of the 1760s, but it was economics that produced the real hostility in both cases. Because the northern states industrialized themselves, they grew prosperous and populous, and the American government, run by the centers of population (who had the votes, you see) naturally organized itself in such a way as to further favor the already favored.

The southern states found themselves sliding ever back into a colonial position that was clearly to be permanent unless they did something drastic. They tried to increase their power by expansion at the expense of Mexico (over considerable northern objection), and when that didn't work, they decided to leave the Union and form a Confederacy of their own.

The southern states never recognized (or wouldn't admit) that it was their own deliberate choice to be a slave society rather than a machine society that was holding them back, and so they never realized that they couldn't win. Even if they had manged to establish their "independence," they couldn't win.

If victory could have been determined in a purely military fashion on the battlefield, the new Confederacy actually had a good chance. Although the Confederate population was substantially lower than that of what remained of the Union, that was not really a decisive factor.

The Confederacy had the best generals (Robert E. Lee was, beyond any doubt, the greatest Captain ever born on the territory of the United

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States), the best cavalry, the best soldiers. And they had the advantage of the defense.

Whereas the Union armies had to advance and occupy the Confederate territory (which was large and had few vital centers) against desperate resistance if they were to win the war, the Confederate armies had only to hold the Union to a stalemate. They did not have to invade the northern states; they were not fighting for territory. All they had to do was hang on, in any way and however precariously, just hang on till the Union grew sick of the mess and gave up.

We know what that's like now. We had to destroy the Vietcong and North Vietnamese in the late unlamented unpleasantness in order to win, but they did not have to destroy us. They had no way in the world of doing more than pinpricking us. They, however, didn't have to win in the conventional way, they just had to hold on at any cost till we were tired of the whole miserable business. They did — and won a war in which they didn't win a single battle in the field.*

Then, too, the Confederacy expected to have the industrial nations of Europe on their side, especially Great Britain. The reasoning was that Great Britain would need the cotton of the Confederacy for their textile factories and rather than risk their own economic ruin, the British (so reasoned the Confederacy) would break the Federal blockade and take up the role of arsenal for the slaveocracy.

Neither calculation worked. To take up the latter first, Great Britain did *not* side openly with the Confederacy. The British ruling classes would have liked to, if only to weaken the United States and throw the Americas open to British exploitation all the more, but they never went past the point where their help to the Confederacy would be decisive. (Part of the reason for this was that the very British textile workers who were thrown out of work when the factories shut down for lack of cotton rallied in great demonstrations against the Confederacy that could have put them back to work, because of their disapproval of slavery. It was an example of something that happens but rarely in human history — the victory of long-term idealism over short-term advantage).

And why didn't the Union weary of the Civil War, as, a century later, the United States wearied of the Vietnam War? Of course, the Civil War was a lot closer to the heart, a *lot* closer. Another factor was that the Union had the incredible luck to have for its president, Abraham Lincoln — who never gave up.

Even the Tet offensive had been a tactical defeat for them.

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Lincoln had his goal, and although he was laden down with recurrent disaster on the battlefield, with stupidity, corruption, and near-treason at home, and although he bore more on his shoulders than any one man had a right to bear*, he never wavered, he never gave up, he never for one moment lost sight of where he was going and why; nor, in the process, did he lose a bit of the saving humor in his mind, nor a drop of the milk of human kindness in his heart — but I've got to get off the subject, or I'll never end this sentence.

Yet suppose Lincoln had broken and suppose the British had come in, and suppose the Confederacy had dictated a peace that left them independent, with Great Britain ready to guarantee that independence against a later American attempt to defeat them. Would the Confederacy have won?

Not at all. They would have gained nothing. As long as they remained an essentially rural economy based on slave labor, they would have remained a colony. All they would have accomplished would have been a change of masters — no more New England, but Old England. And Great Britain would have insisted on freedom for the slaves, too.

But never mind; the Confederacy didn't win. The Union won the war. Why?

It wasn't because Great Britain did not intervene. That only gave the Union a chance not to lose. It wasn't because Lincoln was Lincoln; that only meant the Union wouldn't give up. What made them *win!*

To see why that was, let's go back once more to the early days of the Republic.

In the days when the United States was winning its independence, Frederick II was on the throne in Prussia. He had won several wars against the larger monarchies that surrounded him, and he is therefore commonly known as "Frederick the Great" — the last monarch in history to receive that title. In 1783, when American independence was confirmed and a fact, Frederick was 71 years old, had been king for 43 years and had only three years left of life. He was Europe's elder statesman, and was anything but a fool — and he had a clear opinion of the new nation. He said it would not survive.

His reasons were logical. The new country called the United States was too large and too empty to hold together. It was a reasonable opinion for a

**After the battle of Fredericksburg on December 13, 1862, the most disastrous of all the Union defeats — brought on entirely by incapable generalship — Lincoln said, "If there is a worse place than hell, I am in it."*

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monarch to hold whose own nation was small and who was surrounded by other small nations. Smallness was, to him, a fact of life. And he may even have been correct if his unspoken assumption, that the state of technology would remain unchanged, had been correct.

If we look at the early United States without the benefit of hindsight, we can see where Frederick might have had reason on his side. The United States was a collection of thirteen different states, each jealous of its sovereignty, and each by no means unsuspicious of the rest. They couldn't possibly pull together over the long run.

The Constitution meant a change for the better, for it produced a Federal government superimposed above the states through a voluntary surrender by those states of parts of their sovereignty. Even so, the states remained reluctant to interpret their surrender on anything but the narrowest basis. This meant that for decades, the Federal government was forced to leave the individual states the necessary improvement in facilities for transportation and communication that would make it possible for so large and empty a territory to hold together and become a modern nation.

Despite the inefficiency inherent in each state doing its own thing, toll-roads and canals were built, particularly in the industrializing north. The most famous product of this age was the Erie Canal, which was opened in 1825 and which served to connect New York to the interior. New York, which till then had lagged behind Philadelphia as the national metropolis, suddenly forged forward to become and remain the largest city in the nation and the most remarkable city in the world.*

Roads and canals have their limits, however. Men can only march so fast and horses can only gallop so fast on even the best road, while boats can only be poled along so quickly on even the best canal. Under those conditions, even roads and canals don't serve to knit a nation together when it is the size of the United States.

To be sure, the ancient Roman Empire was larger than the United States of 1800, and it was held together by nothing more than roads on which horses galloped and armies marched, and by galleys on which men rowed. The Roman Empire, however, had been built up by relatively slow accretion of (for the most part) already civilized areas, and at its peak, did not have to compete with nations that were more compact *and* more technologically advanced.

The earlier Persian Empire, on the other hand, though as large as the Roman Empire and held together in the same fashion, *did* have to

*See IT'S A WONDERFUL TOWN, F & SF, May, 1976.

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compete with smaller states that were more technologically advanced. Down went Persia, therefore, before Alexander the Great of Macedon, in a campaign that is always treated as a semi-miracle but was actually a foregone conclusion. Alexander was by no means David fighting Goliath; he was Hunter shooting Elephant.

The United States in those first decades of independence faced Europe in the position of the Persian Empire facing the Greek world. The situation was made worse (on a short-term basis) when President Jefferson carried through the Louisiana Purchase in 1803 and doubled American territory without doubling American ability to hold all that territory together against the strain of external pressure.

What saved us was first the insulating effect of three thousand miles of ocean between ourselves and Europe. Secondly, Great Britain, which alone among the European states could cross the ocean freely, was occupied with Napoleon. (Eventually, Great Britain was reluctantly forced into war with us in 1812, and with both eyes on Napoleon, with only an occasional glance in our direction, and on battlefields three thousand miles from home — she held us to a draw.)

But if circumstances saved us in our early, very vulnerable time, what was it that strengthened us, (even as our area grew still larger till it was as large as all Europe) and kept us from falling apart under the terrific strain of the Civil War?

The answer lay in advances in technology, of course, and for the details there, we will have to wait for next month.

COMING NEXT MONTH

MICHAELMAS, a new novel by ALGIS BUDRYS, is his first novel in ten years, an unusual and adventurous tale about an astronaut who returns from the dead and threatens the survival of human civilization. The August issue is on sale July 1.

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Mel Gilden wrote "A Lamed Wufnik," December 1975. His new story is an offbeat and affecting tale of a golem, an automaton that becomes something more...

The Ice Cream Golem

by MEL GILDEN

Irving Feinberg, the ice cream man, sat across the table from his brother, the doctor, zouping up chicken soup made by the doctor's wife before she had been hurried off to the movies.

The room they sat in was small, what in Beverly Hills they call a breakfast nook. And yet the room betrayed to the ice cream man the fact that his brother was very rich. In the sumptuousness of the wallpaper, in the fineness of the silver, even in the high polish on the tiled floor, he saw evidence of it.

"It's good soup," the ice cream man said.

"Lillian is a fine cook. You ought to eat here more often."

"I'm not starving at home. I don't want to bother."

"It's no bother. We both like to have you over."

The old argument.

Irving said, "Does she always leave so fast when a guest arrives?"

Irving's brother, Abe, said, "Actually, it was my idea that she go to the movies. I wanted to talk to you alone."

Irving raised his head and said a long "ah," as if he understood. "You've got secrets from Lillian?"

"No. She knows. I just thought I'd like to talk to you brother-to-brother."

Irving nodded. He finished his soup and Abe brought out the steaks.

When they were through with dinner and Abe had arranged the dirty dishes carefully in the dishwasher, he invited Irving out to the garage. Irving knew Abe had converted part of the big four-car garage into a workroom that occasionally doubled as a laboratory. Irving said, "If you plan to murder me for my money, you're making a big mistake."

Abe laughed.

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Outside, the air was cool. The evening sky actually showed a few stars through the smog and overcast. There was a smell of jasmine. Irving breathed deeply, but Abe was too eager, too much in a hurry, to stop and enjoy the evening. Abe walked across the driveway to the garage, jiggled the key in the lock and opened the door. Irving heard the low rumble of an air conditioner begin when Abe flicked on the lights.

The big room was not hot, but heavy with warmth, as if the air had somehow thickened in the closed room during the long warm afternoon. It smelled of moist earth. There was a long table built into the wall along one side of the room. On it were wires and transistors, all kinds of electrical paraphernalia, among it an oscilloscope Abe had built once in a flurry of enthusiasm for electronics. Along the walls on shelves were the usual small boxes of nuts and bolts, marking Abe as a do-it-yourselfer, and chemical reagent bottles that were less familiar. There were medical instruments in a tray and a sterilizer.

On a long wooden table in the center of the room was a man-sized thing under a sheet.

Abe said, "Wait. Let me say a few things before you ask any questions."

Irving leaned against the electrical bench with his arms folded. Abe stood by the wall opposite. The table with the sheeted shape on it crossed the room between them like a line of demarcation. Irving said, "How could I have any questions just because you have a body in your garage?"

"It's not a body. Exactly. Let me start at the beginning."

Irving waited.

"You know," Abe said, "I've always felt a little guilty about me running off to be a doctor, leaving you with the family to take care of."

Irving shrugged. "I don't worry about it. It's a long time ago. I didn't do so bad."

"You've got a nice little business. But isn't it difficult all by yourself?"

"I've got Mendel to help me."

"That schlep-along?"

"Help is help. Whatever he does I don't have to do."

Abe said, "Nevertheless, I haven't forgotten it was my little brother who allowed me to go to medical school."

"So nu?"

"So it's time I did you a favor. I know you wouldn't take money. I thought maybe this you would take." He pulled the sheet off the thing on the table. Lying there was a man made of mud. Irving approached and studied it. It was well-formed and even handsome in

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a primitive architectural way. It was naked and blackish-brown like dirt. Genitals were in the right place. Irving hesitantly touched its arm and left a shallow imprint. The arm felt like moist earth.

"A golem," Irving said.

"Yes. An artificial man constructed according to the ancient lore."

"It's a nice piece of work. You did it all yourself?"

"Well, I had some help with the final sculpting of the features. Hyam Steiner, the artist."

"I knew those fancy friends of yours would come in handy eventually. But it's large. I don't know if I have room for it in my house."

"It's not for your house."

"Then what?"

"I built it to help you at the ice cream yard."

Irving cocked his head to one side and drummed his fingers on the table at the golem's side. He said, "You mean it's alive?"

"Not yet. You have to put the magic tablet under its tongue first."

"Uh-huh."

"You don't believe me."

Irving put up a hand in protest and said, "Listen. If you want to make me a present of a piece of Hyam Steiner statuary, I'm happy to take it. I could find a place to put it. But such a story. You've developed a sense of humor lately?"

Abe turned around for a moment, then presented Irving with a small black box. He said, "The box is cheap plastic. But what's inside is valuable. Take a look."

Irving took the cover off the box and set it on the table. Inside the box on a bed of cotton was a thing the size of a cough drop, but pale and white like a mushroom seen under fluorescent light. Irving said, "This, I'll bet, is the magic tablet."

"Correct. All the proper prayers have been said over it. All the proper elements have gone into its manufacture — including such things as dust from the inside of the Holy Tabernacle collected last Rosh Hashanah and a little blood from a cow newly slaughtered in a kosher manner."

"Don't get me wrong, I could use the help. Mendel is, as you say, a schlep-along, but this —"

"Pick up the tablet."

"You always did know what was best for me." Irving chuckled.

"You're afraid."

Irving said, "All right. I been silly before. I can be silly now as easy." He picked up the magic tablet and rubbed it. It was cool and smooth. Engraved on each side of the tablet was a Star of David and a aleph, the first letter of the Hebrew alphabet.

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"Look here," Abe said. He pointed to the golem's forehead. Irving looked and Abe went on, "You see the word —"

"In English letters —"

"English letters, yes. I've been told the magic will work even so. The word is *EMET*, the Hebrew word for 'truth.'"

"Yes?"

"Yes. Now, as long as the word remains intact, the golem is capable of mobility and will manifest a rudimentary intelligence."

"Such big words."

"You're not a dummy, Irving. You read more books than I do. Don't play simple."

"I'm sorry. Go on."

Abe shook himself to recover his dignity and train of thought, and went on. He said, "If for any reason the creature must be destroyed, you must destroy the first *E*, leaving the word, *MET*, which is the Hebrew word for 'death.'"

Irving clucked his tongue and said, "If this were an old movie, I ought to say, 'There are some things mortals must not tamper with, my son.' Assuming you've really tampered."

"This is a perfectly decent Jewish project. Rabbis down through the ages did things just like it. Only God can make a man, but this isn't a man. It is a golem. It never was alive, never will be. Anything it does it does by magic. It's a trick — like a magician at the theater levitating a woman."

Irving suddenly smiled. "Now I know where Lillian went. She's inside the golem."

"No, Irving."

They were both silent for a while, Irving looked at the golem, Abe looking at Irving.

Irving said, "All right. Let's try it."

Abe showed him how to open the mough and put the magic tablet under the golem's tongue, just so, demonstrating with a chip of wood. "It's simple," Abe said. "Go ahead and do it."

Irving picked the tablet from its bed of cotton again, again felt its coolness, its smoothness between his fingers. He looked at Abe, searched for signs that Abe was making a fool of him; but there was nothing there except a kind professional smile encouraging him to go on. "It's not dangerous?" Irving said.

"The thing has no mind of it's own; it has not even the initiative to be dangerous. You have to tell it what to do. Think of it as a second body."

"A second body," Irving mumbled. He opened the mouth and, as Abe had shown him, placed the magic tablet under the golem's tongue. Irving jumped back.

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They waited a few seconds and nothing happened. Irving turned away and said, "I knew —"

"Look!"

The eyelids blinked a few times and then the eyes were open, staring at the ceiling. Irving came closer to look. The eyes were like two milky marbles. Staring through, staring beyond.

"Tell it to sit up," Abe said.

Irving looked from his brother to the thing on the bench. He wet his lips and said, "Sit up."

The golem sat up. It gave the impression it was made of wooden planks bolted together, so stifly it moved; it should have creaked.

"A fine helper," Irving said, "with arthritis."

"It will loosen up after it moves around a little."

Irving said, "Get up and stand by the bench."

The golem complied, leaving behind little motes of grit on the bench, making a little mess of dirt on the worn linoleum floor. But it stood, still stiff and with its hands at its sides, as it had when it was lying down.

Irving was fascinated. He gave the golem commands to walk, to run, to fetch, carry, lift, and put down. It executed each action with a dogmatic insistence on following Irving's instructions exactly.

"It sounds like sandpaper rubbing together," Irving said.

"What would you expect from a creature of earth?"

"He won't dissolve from the ice in the freezer?"

Abe shook his head. He said, "The golem is a creature of earth, but it is a magic creature. You can only destroy it by destroying the *E* on its forehead."

Irving nodded. He ordered the golem out to his car and he drove it home, watching it out of the corner of his eye. The golem was impassive. It gave no sign it had life that was either God or magically given.

The next morning Irving found the golem in the living room sitting exactly as he had left it before going to bed. He gave the creature some old clothes he kept on a shelf in a closet and showed it how to put them on. They were too small but they would have to do.

Only one thing was wrong with the golem now: The word imprinted on its forehead would arouse curiosity in anyone who saw it. Irving combed the golem's thick gluey hair down over its forehead so the bottom edge of the hair swept the tops of its eyebrows. Moist gravel was left in the comb.

Irving nodded at what he'd done and went to rinse the comb off in the kitchen. When he came back, Irving spoke to the golem. He said, "We're going to work now."

"Work," the golem said. Its

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voice was gravelly, as Irving had expected.

"I'm going to call you Frank. Do you understand? Your name is Frank." Irving spoke slowly and distinctly.

"Frank," the golem repeated.

Irving chuckled. "It's short for Frankenstein," he said.

"Frankenstein."

They walked to the car. In the clear morning sunlight Irving could almost believe Abe had perpetrated a hoax on him. The golem looked like a real man, with a grayer complexion to be sure, with a stare like a blank wall, certainly, but there were men like that around — strong silent types. Irving shook his head.

When Irving and Frank got to the ice cream yard, Jeffery, the mechanic, was already there welding together the sheet-metal rear fender of truck 82 where it had been torn in a small traffic accident a few days before.

Proudly, Irving introduced Jeffrey to Frank. There was an uneasy moment when Jeffery held out his hand and the golem didn't respond, but Irving ordered Frank to shake hands and then sent him to wait by the freezers while he explained that the new man wasn't very bright and had been in an institution most of his life. Thus carrying ice cream would be in the nature of therapy for him.

Irving was thankful Jeffery accepted this story and went back to his welding.

Mendel showed up soon after that. He was a thin man who wore, in addition to his limp clothing, an old baseball cap. He walked briskly, but as if there were something uncomfortable between his legs. After Irving introduced the golem, Mendel took it to meet his sister, Monica, and to get coffee. Monica took care of the paper work at the ice cream yard.

"Coffee time," Mendel shouted in a raucous parody of his own voice as he walked across the yard toward the stucco building that held the garage and the office.

Customers began to arrive. Irving watched happily while they searched through their nearly empty cold boxes — for yesterday had been as good a day as this one promised to be — and marked down on long white order forms the kinds and amounts of ice cream they wanted.

Irving took the first order from behind the metal pipe that ran down the outside of one of the two big freezers and, grasping the big cold handle of the heavy door, went inside to find the ice cream the man wanted. He knew Mendel wouldn't be back for a while, having gone to get coffee for himself and his sister. He would probably take the golem with him for company. It might be

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half an hour before either Mendel or the golem returned to help.

Irving piled up boxes of ice cream on the worn table in front of the freezer and went to cut the man some dry ice. When he was done with that order, he filled the next one. He went in and out of the cold, misty freezer.

Mendel returned eventually, but without Frank. Monica seemed quite taken with the golem, Mendel said. Irving took the orders he'd already filled and walked across the yard, through the garage, past the evil-smelling bathroom to the office. The outer office was piled high with one and two dozen boxes of chocolate bars and cinnamon sticks. It made the entire office smell like a candy factory. Irving found Frank in the inner office across the desk from Monica — a thin birdlike woman with a constant look of exasperation on her face — who was talking at him a mile a minute. She was telling him about the cold she'd had for the last three weeks. Irving told the golem to go out and wait for him by the freezers.

Frank lumbered out of the office without a second look at Monica.

Irving said, "Why do you keep him here when you know he's got work to do in back?"

"I don't keep him here. He's got a mouth. If he's got work, let him say, 'Monica, I got work,' and he can get up and leave."

Irving then told her the same story he'd told Jeffery, about how Frank was a little simple and could not think of things for himself.

Monica sighed and said, "That's too bad."

"What's too bad?"

"Nothing. Nothing. Maybe Frank can take some of the work load off Mendel."

"Sure," Irving said, and walked out.

The morning passed quickly. Mendel grew more and more fond of the golem as it took over more and more of the work. Irving had to remind Mendel that Frank was an additional worker, not one hired to take his place. Grudgingly Mendel went back to work.

Once told where something was in the freezer or how to use the cutting machine, Frank did not have to be told again.

Late in the morning Mendel went out to work the streets in his own ice cream truck, leaving Irving alone with the golem. The work was light, so Irving stood between the freezers smoking a cigarette while he watched the golem filling the few orders that came in.

When Irving took the order forms to the office so Monica could process them, she pumped him for more information about Frank.

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Irving was as vague as possible.

At about two in the afternoon Irving defrosted the freezers, a job he didn't yet trust to the golem, and then drove them both home.

Though Irving thought of his brother Abe as rich, Irving himself was hardly a pauper. He smoked, but neither drank or gambled. His adventures with the female sex were rare, and usually he went out with ladies who didn't mind, and sometimes even enjoyed, paying their own way. He occasionally splurged on a movie or a book, but in general he saved his money.

He lived in a white house on a pleasant street in an upper-middle-class part of town mostly populated by family men with their own small businesses. Irving actually knew very little about any of them. They knew as much about him.

Irving walked the golem into his house and, after standing it in a closet in the bedroom, commanded it to open its mouth. It did, and Irving took out the magic tablet. The golem stiffened immediately, became like a statue. Irving watched for the slightest movement, saw none, and nodded. He went off toward the kitchen whistling.

The sun stayed out all week and business boomed. The golem made it possible for Irving to sit down a little and rest during all but the busiest times. Mendel, instead of letting Frank do all the work, began to work harder himself — as if he were somehow in competition with the golem and sought to prove something.

Irving called his brother and expressed his appreciation. He invited Abe and Lillian to dinner, being something of a chef himself. Abe and Lillian came early and stayed late. They told and retold old family stories about relatives with idiosyncrasies and laughed until tears ran down their faces and their sides hurt.

Monday of the following week was overcast. Irving brought a vacuum bottle of homemade chicken soup to work and sat glumly in the outer office drinking it out of the bottle's tin cap.

"Sixty-two seventy-six, Schwartz," Monica called in her raspy voice. Schwartz walked to the small window in the wall between the two offices and set out pillars of change to pay for his ice cream.

The golem came into the office. Irving saw Monica look at it for a moment, then tear herself away and concentrate on counting Schwartz's money. The golem stood before Irving and said, "Mendel says there's nothing for me to do. He sent me to ask you what I should do."

The golem's voice sounded

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familiar, but Irving could not place it. Then he remembered what his own voice sounded like when played back to him from Abe's tape recorder. The golem sounds just like me, Irving thought. Was that supposed to happen? What would happen if Frank started to look like him and act like him until no one could tell them apart? Irving shook off his sudden fear and tried to think of something for the golem to do.

The sky was gray and threatened rain, and the wind blew in sudden icy gusts. Irving's business reflected the weather; it was not a great day to sell ice cream. There was really nothing that needed to be done.

Monica said, "Why not let him straighten up the candy? You've been complaining for weeks you can't find anything."

Irving had indeed not been complaining for weeks. He had mentioned once that he couldn't find the jelly drops only to discover them a second later behind a two-dozen box of chocolate bars. However, putting the candy in order would not be a bad idea.

"Frank," Irving said, "put all the boxes that look alike together. Stack them neatly. Do you understand?"

"Yes." The golem went to work. Irving watched him abstractedly while he drank his soup. In the garage, Jeffery was playing a music box very loud. He was adjusting it and trying to fix it. The music sounded as if it had been recorded on flannel.

Frank crouched down on the floor and tried to pull a pile of boxes out from under the table. Irving squirmed around to get out of his way, but suddenly the boxes slipped loose and knocked into his leg. Some of the chicken soup slopped out of the cup and fell like the slap of a hand on the golem's head and left a dark wet area.

Irving stood up and said an involuntary, "Oy!"

The golem was still on the ground struggling with the boxes. "Leave those alone," Irving said irritably. "Go out to the freezers."

The golem left, shaking its head — a thing Irving had never before seen it do.

"What happened?" Monica said.

Schwartz chuckled and with a heavy old country accent said, "Your new man is a klutz, no?"

"It was as much my fault as his," Irving said while trying to brush drops of chicken soup off his pants before they settled in. "We will both live." He walked out of the office and went to stand at the door of the garage listening to the gaudy tinkle of the music box and watching Mendel sit on the table staring off into space and smoking

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a cigarette. Frank stood near Mendel looking all around, moving his head with birdlike jerks. My God, Irving thought, the golem looks more alive than the man.

Irving walked across the yard — still full of trucks so late in the morning — picked up a broom and began to sweep. He kept on even after his hands turned red and stiff in the cold air. He could have told the golem or even Mendel to do it instead, but Irving liked to feel useful. When things went badly he would rather work than watch somebody else work. That way he felt there was at least some kind of progress.

He had finished sweeping the yard and was watering down the trash in the big bin so he could stomp it into a smaller space when the golem walked to the bin and looked up at him. It said, "What is ice cream?"

Irving laughed gruffly and said, "The most important thing about ice cream is that it doesn't sell when the weather is miserable."

"Yes, but what is it?"

Irving was about to give the golem another quick sarcastic answer when he realized what had just happened. The golem — a creature of little intelligence and no initiative — had just asked him a question. It was simple and perhaps inane, but a question nevertheless. Irving said, "Why do you ask me this?" He watched the golem closely. Frank twisted his features, thinking hard, as if his brain were a sponge and he was having trouble squeezing his next thought to the surface.

"Because," the golem said, "I want to know."

"He wants to know," Irving said to himself. He shut off the water and hurridly coiled the hose on the ground.

Mendel looked at Irving with surprise when Irving left him in charge. He could go home or go out in his truck any time he liked. Irving told Jeffery he could lock up when he was done checking the trucks.

When Irving told Monica he was going home with the golem, she at first enquired about his health, then complained he was leaving Mendel with all the work, and was at last mollified by Irving's statement that he'd decided to give Mendel "some responsibility."

When Irving got home with the golem, he went to his room and picked up the mystery novel he'd been reading. He took it into the living room and sat down next to the golem on the couch. Irving opened the book and said, "Frank?"

"Yes?"

"This is a book." Irving held it up. "It has words inside. I'm going

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to teach you how to read the words."

The golem said nothing. Irving felt a little silly. Abe had said the creature possessed no more than a rudimentary intelligence. The accident with the chicken soup probably changed nothing. There was no reason for Irving to think he could make the creature read. On the other hand, it couldn't hurt to try.

"Look here, Frank." Irving followed the words with his finger as he read out loud to the large earthen thing beside him.

Irving dialed his brother's number that evening.

"Hello, Abe?" Irving said. "Me."

"Yes, Irving. How is the golem working out?"

"It's a big help. I can't tell you."

"You see, I told you."

"As usual, you were right. But that's not why I called."

"No?"

"No. You remember you told me the golem had no mind?"

"More or less. I told you you had to tell it what to do."

"So, I didn't call to split hairs. I want to tell you something." Irving could hear Abe breathing, waiting at the other end of the line.

"Abe, I'm teaching the golem how to read."

There was a longer silence. Over the phone, Irving could hear Lillian clattering dishes and pots in the kitchen.

Abe said, "That's a good joke, but I'm the fellow who built it. Remember? I know that's not possible."

"But I know it *is* possible because I did it."

"You taught it to read?"

"I'm teaching it."

"But it's not possible. I've read all the holy books and nowhere —"

"Why don't you and Lillian come over and I'll show you. We'll talk about it. I think I've got a theory."

"All right. About half an hour."

Abe and Lillian arrived and Irving gave them a demonstration of what the golem could do. No one said anything at first. Then Lillian said, "I think that's marvelous."

"Marvelous in the old sense," Abe said. "In the manner of a marvel. Because as far as I know, teaching a golem to do anything beyond a menial task is impossible."

Irving held out his hands to the golem, "Look —"

"I'm not denying that you've done it. But how? You said you had a theory."

"You've heard jokes about the curative properties of chicken soup?"

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Abe and Lillian nodded.

Irving went on to explain about the accident that had occurred during the afternoon at the ice cream yard.

"But that about chicken soup is all folklore. There is no solid basis in —"

"I'd always heard the golem was folklore too," Lillian said.

Abe looked at her, an enemy in his own camp. He shrugged. "All right then, the thing must be destroyed."

The golem turned its head slowly and looked at Abe. Abe said, "I think we'd better discuss this while the golem is in another room."

The golem looked at Irving. Irving said, "You go ahead. It'll be all right." The golem looked at them all and went into the kitchen.

"Those eyes," Lillian said.

"Yes," Irving said. "They've gotten clearer since I began to teach him."

Impatiently Abe said, "All right. This has gone far enough with your chicken soup and your clearing eyes. The thing obviously must be destroyed."

"Why?" Irving and Lillian said together.

"Because you can't have a thing like that — with all its strength — running around loose. It has no sense of right and wrong."

"Before," Irving said, "you said it had no intelligence."

"But —" Abe sputtered a moment, then went on. "The thing has no soul."

"An odd thing for a doctor to say."

"Perhaps, but true nevertheless."

"It is intelligent," Irving said. "It is self-aware."

Abe retreated into dogmatism. He said, "It must be destroyed."

"But why?"

"I'll build you another."

"That's a good idea in any case."

"Oh? Why?"

"Because Frank won't be able to work for me any more. I'm going to send him to school."

The conversation stopped. Abe drummed a hand on his knee and Lillian looked from her husband to her brother-in-law worriedly.

"You can't send it to school," Abe said.

"Why?"

"Why, why, why. I'll tell you why. Because the thing is a monster. It should never have lived. It is not alive now. This intelligence it seems to have is nothing — a fluke. I don't know if it's the fault of the chicken soup or not. All I know is that my brother is a crazy person — his brain may be numbed by cold — if he really thinks it's worthwhile to send that *thing* to school."

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"I think."

Abe stood up and Lillian stood uncertainly beside him. Abe said, "All right, you're a grown man. You can make your own decisions. We'll see what happens."

"You're not staying for a little tea?" Irving said.

"No."

"It's getting late," Lillian said. "We should be going."

And they went.

Shortly after that Irving told Frank what he was going to do, and the golem smiled.

The next morning Irving let Frank and Mendel work out in back while he stayed in the office at his desk calling colleges. Before calling, Irving had considered neither the fact that Frank couldn't fulfill the entrance requirements nor that the new quarter did not start for another month. Frank could wait, Irving thought, but he, Irving, could not. He wanted to see results right now. He looked in the telephone directory under tutoring services. He called three of them, and they all quoted a higher price than he could afford to pay.

Then it occurred to him that he himself could give Frank an elementary education — reading, a little arithmetic, history, geography. When things got more complex, then was the time to hire professionals. Why not? Irving had most afternoons free. How better to spend them?

The day was warmer than the ones before it, and the wind had stopped blowing. Business was not great, but for the while all three of them were kept busy filling orders. As usual, Mendel went out in his truck late in the morning, and Frank and Irving were left alone. They sat side by side on the table before the freezers. While he talked to Frank, Irving watched Sanchez load ice cream into his truck.

"I have decided," Irving said, "that you will not go to school after all."

A shocked silence. Frank looked at him. "Why not?"

Irving smiled. Frank would never be a diplomat. He was too direct. Irving said, "I have decided I will teach you myself."

"That is good."

"You are happy at my decision?"

"Yes. I like you."

Irving was touched. He said, "I like you too."

Sanchez tore the top off a box of Popsicles.

That afternoon the golem sat in the kitchen watching Irving cook a little hamburger in a frying pan. When the golem asked what he was doing, Irving explained he was fixing something for himself to eat.

"What is it?" Frank said.

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Irving told him what it was.

"What is it made of? Where does it come from?"

Pleased at Frank's inquisitiveness, Irving told him all he knew about raising cattle, and slaughtering them, and how the meat was ground and packaged and sold in stores by the pound. The golem's eyes opened wide, and Irving imagined it was because of his fascination with the subject.

But when Irving finished, the golem said, "You mean you kill and eat living things?"

"Only animals."

"But to take away a life for any reason is a terrible thing."

"What would you like me to eat? Even plants are alive. If I don't eat something I'll die too."

The golem puzzled over that one for a while. In the frying pan the meat began to sizzle and turn brown. A wonderful smell filled the kitchen. Irving picked up a metal spatula and touched the patty with the corner of the blade. Red juice oozed up. Irving tried not to think of blood.

The golem said, "Animals are aware. They have joy and sorrow in their lives even if they have no names for them. Plants have none of this."

"The latest from the scientists," Irving said, "is that plants feel too."

"If that is so, then it is fortunate I do not have to eat at all."

When the hamburger was done, Irving put it on a dish with the spatula and poured a pool of catsup on the plate next to it. He sat down opposite the golem and looked at what he'd made. Feeling guilty, he forced himself to cut off a piece of hamburger with his fork and put it in his mouth and chew it. He tried to enjoy, but the food was like ashes.

Irving looked at the golem, tried to convince it by smiling that he was enjoying his food, but even to Irving, the attempt felt a failure.

Three weeks later, Irving Feinberg went to his brother a nervous wreck. Lillian was out doing charity work for the B'nai B'rith. So the two men sat alone in the kitchen. They had cups of tea before them.

Irving said, "I remember our grandfather drinking tea from a glass with sugar in his mouth." He smiled weakly.

"You didn't come here to talk about tea," Abe said.

"No, I didn't." Irving watched the steam rising from his cup. At last he said, "I came to talk about Frank."

"The golem?"

"Yes. The golem." He tried to decide how best to begin, opened his mouth, and closed it up. He tentatively sipped the tea, found it

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too hot to drink, and put it down.

"Nu?" Abe said.

"I don't understand it, Abe. Am I particularly ugly? Have I got warts, maybe? A hunchback? Three eyes?"

Abe shrugged. "I don't see what you're getting at."

"What I'm getting at is that Frank is a big success with the ladies. He could beat them off with sticks and they'd flock around."

"A golem with sex appeal?"

"He looks more human all the time. But I don't really begrudge him. I'm a little jealous, yes, but he doesn't do it to make me angry. He just makes me aware of my own shortcomings."

"Irving."

"What?"

"Instead of doing a self-analysis, why don't you just tell me what's going on?"

Irving nodded and told Abe about how one night he'd accompanied Frank to the library. The night was cool and pleasant after the heat of the day, and because the library was not far, they walked. As they walked, Irving imagined that the golem was his son, grown tall with the help of nutritional benefits not available in the old country.

Irving felt a kind of pride he'd never had before. Though not particularly ugly, and not without his good points, Irving had never had much luck with women. He knew some, of course, and felt a warmth and friendliness toward a few of them that was even returned in an intellectual way, but the family he longed for was denied him. In Frank, the golem, Irving saw the son he never had.

Frank pushed open the swinging door, and Irving followed him into the library. Inside, light came from white globes that hung from the ceiling and made a sheen on the smooth wooden tables. The air was heavy with the musk of old paper. The place was quiet, comfortable.

There were two librarians behind a high U-shaped desk in the center of the room. One of them was old, with little curls bobby-pinned tightly to her head. The other librarian was young and not bad-looking. Both of them smiled at Frank as he went by. "Good evening, Frank," the young one said.

Frank returned the greeting and went on.

"You've made friends here," Irving said. "That's good."

Irving and Frank each went off by himself looking for books. Irving found a mystery and a book about astronomy and went back to the table to wait for Frank. But Frank was already there. Two girls were with him. One leaned toward him over the table on each side. They giggled occasionally. Irving

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walked over to the group and said, "Well, Frank, what's going on?" He tried to say it in a friendly manner, but his voice developed a sharp edge all by itself.

Frank said, "I am teaching these girls arithmetic."

To Irving, the girls looked much too old to need lessons in arithmetic, but he was willing to give them the benefit of the doubt.

"Hello," Irving said to the girls.

They introduced themselves. One was Marsha, the other was Mildred. It was obvious from the way they nodded to him politely and then turned their attention back to Frank that Irving was interrupting. He went to another table, where an old man sat and looked at the day's newspaper, and tried to concentrate on the mystery, but the low voices of the girls snagged his attention away time and time again.

It wasn't until the library closed at nine that Frank and the girls got up to leave. Frank came to Irving and said, "Is it all right if the girls walk with us? They say that it's late and they are afraid."

"Sure. Of course."

At the check-out desk, the young librarian seemed to take a little longer with Frank's books than she had with the books of the two girls, and when it was Irving's turn he was surprised when she said, "There you go, Irv."

"How did you know my name?"

"It's on your library card," she said.

He flushed with embarrassment. "Of course," He picked up his books and hurried out the door after Frank and the girls. They were already halfway down the block; from the way they laughed and from the way the girls gripped Frank's arms, Irving could tell they were doing quite well without him. He didn't even try to catch up.

Irving said to Abe, "Then Marsha came over a few times, and Mildred came over a few times. Who knows what they had in mind."

"It doesn't take *much* imagination."

"I even saw Miss Frisch, the young librarian. Frank wasn't home. Off with Marsha or Mildred — I forgot which. We talked for a while." Irving shrugged. "A nice young lady." He waited for Abe to say something.

"Well," Abe said, "I told you to get rid of it."

Irving waved the idea away. "No, no. I don't deny him. I like him and trust him. I even gave him his own set of keys for the ice cream yard. No. I'm not jealous. I just wonder what he has that I don't have."

"Who knows what a woman sees?"

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Irving drank some tea.

"You look tired, Irving. You need a rest."

"Tired is tired."

"Surely you can't be that worn out just thinking about the golem's conquests."

"No."

"Well? Tell me everything. I'm a doctor, remember?"

Irving said, "Frank doesn't help in the mornings any more. Since he began to study like a person, he needs to sleep at night like a person. Just like a person. During the days, he stays home and studies."

"I told you to get rid of it. It's taking a lot out of you."

"You have no idea. He's turned me into a vegetarian."

"How did he do that?"

"Always talking about the sanctity of life. But," Irving held up his hand to stop Abe's comment, "at least I know the golem could never hurt me or anybody else. You can at least stop worrying about that. He even looks on me funny when I eat eggs."

"So I shouldn't worry because even though he's driving my brother crazy with his women and his eating philosophy, he wouldn't hurt anybody."

"It's not his fault —"

"That's not the point. I say get rid of it."

"And I say no!" Then, more quietly, Irving said, "He drives me crazy, sure. And sometimes I think I could do without the aggravation. But then I think, 'Irving, in a way you gave birth to this person — because a person is what he is — even if the birth only consisted of spilling chicken soup on his head. So that makes you responsible.' You see, I say this to myself."

"I think I see."

"You really do?"

"I really do." Abe nodded. "At last."

"Good." Irving took a big drink of tea. It was warm and had a comforting bitterness.

Abe said, "So, Mr. Mother, if you won't take my advice, and you even deny being properly upset, what do you want from me?"

Irving smiled, looked at the table, then up at Abe. "Oh, a friendly ear. Sometimes when I talk things out I understand them better myself. I've just got all this inside of me —"

"I'm your brother. I'm only trying to do the best for you."

"I know. I know."

Before they had a chance to get maudlin — telling each how wonderful the other brother was, recounting tales of their parents, long dead — the front door opened and Lillian came in bringing the cool fresh smell of the night with her and brimming with chatter about her meeting.

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Abe and Irving looked at each other and sighed. Irving, for one, was glad the discussion was over.

The next day was not a good one. Mendel, apparently jealous of how Irving treated Frank, had stopped working almost entirely. When Irving hollered on him, he might grudgingly fill an order, but with plenty of cursing and as slowly as he dared. Monica was trying to give Irving an ulcer with her whining and complaining. "Why can't Frank work any more?" "Why are you so hard on Mendel?" "I come in here to this drafty office every day of the week, and this is the way you show your appreciation?"

Irving told her Frank couldn't work any more under orders from his doctor. It had something to do with the therapy.

Monica screamed and hollered. She accused Irving of not wanting her to be happy. She said, "Just when a man I like comes into my life, suddenly you drag him away."

"It's the therapy."

"Therapy, schmerapy." She turned away from him and yelled at the man waiting in the outer office, "Fourteen twenty-eight, Goldberg."

Irving went outside. When Mendel saw him, he got up and like molasses took an order from behind the pipe and put his gloves on.

When Irving got home the house was empty. He assumed Frank was off at the library or with one of his girls. Irving tried not to think about what might be going on. He felt so tired from the tension and troubles of the day that he ate only a little canned vegetable soup, then curled up on the couch and went to sleep in a ball, his head on his arm.

A ringing awoke him. He staggered to turn on a light and saw that the time was almost eight o'clock. He ran for the phone in his stocking feet. "Hello?"

"Hello, Irving?" It was a husky male voice. Irving, still groggy, wasn't sure who it was.

"Hello."

"Irving, this is Frank."

"Yes, Frank. What can I do for you?" Irving heard a jaunty chugging start up in the background at the other end of the line. An air compressor? Then there was banging on a door. A man shouting, "Open up!"

"Frank, where are you?"

"I'm down here at the ice cream yard. Your brother came and got me at the library. He said you needed me to help you change a tire. Now he's trying to kill me."

"*My* brother? Abe?"

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"Yes."

"Let me talk to him."

"I can't let him in the office. He wants to kill me." As usual, Irving thought, Frank's logic was faultless. Irving said, "I'll be right over."

He drove like a madman, running orange lights that threatened to turn red before he crossed the intersection, squealing around corners. His mind was filled with a jumble of thoughts, all of them concerning Frank and Abe and him. In all of them Abe was approaching Frank with a lethal weapon — a knife, a gun, a hot iron — and saying with menace, "I'm his older brother and I know best."

Abe couldn't do that. It would be murder! Irving drove faster.

He came to the ice cream yard and saw the lights were on in the office. He drove into the yard behind Abe's big car and stopped so fast his own car rocked forward when he hit the breaks.

He ran through the dark motor-oil atmosphere of the garage and into the outer office. Abe was standing in front of the locked door. Next to him were the compressed gas canisters of the welder on a small cart. The nozzle hung on a hook on the cart. Abe looked at Irving and said, "I'd hoped you wouldn't know about this till it was all over."

"What are you doing, Abe?" Irving hollered.

"I'm going to kill that thing."

"It's not a thing. It's alive. It's intelligent." Irving looked through the little window where Monica took money in the morning and saw the golem looking out at him. Irving waved and said, "It'll be all right." Frank waved back.

"It won't be all right, Irving. Not till that thing is gone."

Irving ran a hand through his hair and shook his head. He said, "I don't understand why you have such an obsession about this. Why are you in such a hurry to get rid of the one thing in my life that gives me a little joy?"

"Not joy. You said yourself you're working too hard, you're not eating properly, you're having psychological problems."

"It's just talk. Don't you ever kvetch about Lillian? Didn't you tell me she's driving you crazy with her charity projects? You want I should go over and chop her up into little pieces for your own good?"

"It's not funny."

"Sure not."

There was a short silence. Irving held out his hands to the welding rig and said, "Why don't you wheel that thing back into the garage and we'll all go home."

Abe said, "Irving, you're my brother." He picked up the welding gun by the handle and with the

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sparker, set the thing off. He adjusted the flame until it was a thin blue pencil. It made a quiet hissing noise.

"You talk about my mental state," Irving said. "You're not helping it."

Abe thought for a moment. He said, "You really like this thing?"

"The way a father loves a son."

"In spite of all it's done to you?"

"In spite of everything." The last word took in the universe.

Abe shook his head. Irving judged he'd won a moral victory. He'd gotten Abe to at least begin thinking, begin reconsidering.

The golem spoke up from the inner office. He said, "Irving?"

"Yes?"

"You say you like me in spite of everything."

A trick question, Irving thought. "I like you, yes."

"In spite of everything?"

"Frank —"

"It is important that I know."

"Your two voices," Abe said. "They're almost the same." He stood unmoving, fascinated by the conversation.

Irving said, "Yes. In spite of everything."

"Brother of Irving, you think I'm not good for Irving?"

Abe said, "I know you're not. He's working too hard. He's not eating properly. He's worrying himself sick over women. You with your brain, you figure it out."

"Is this true, Irving?"

"As far as it goes, but —"

"I'm very sorry, Irving."

The door opened. Before Abe or Irving could do anything, Frank grabbed the torch and touched the first *E* in *EMET* with the fire, making the forehead blacken, then glow red, then bubble. The torch clattered to the floor. Frank fell against the gas bottles and with a junkyard noise fell with them to the floor. One wheel of the cart carrying the bottles spun, slowed, stopped.

Irving wept and could not be comforted.

When he had, for the moment, cried himself out, he shoveled and swept the golem's remains into a box, being very careful not to miss a trace of grit that might belong to him. Irving ignored Abe and his offers of help.

Afterwards, Irving drove home slowly and buried the box of dry earth in his backyard.

Irving did not go to work the next day. Nor the next. He slept much, ate little. He refused to speak to Abe either in person or over the phone. Once Lillian called and tried to get Irving to visit, but he thanked her quietly, and with her still protesting, he hung up.

Monica called to ask him what

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was wrong. He told her he was sick and didn't know when he'd be back to work.

In the middle of the afternoon on the third day after Frank's suicide, there was a knock at the front door. Irving had been lying on the couch in the living room staring at the ceiling, his mind a blank, when the knocking startled him. He got up, secretly happy for the attention someone was giving him, and went to open the door. Miss Frisch, the pretty young librarian, was there.

Irving was immediately sorry he was not dressed in something more formal than a T-shirt and dirty pants, sorry that he hadn't shaved in some time.

Miss Frisch smiled at him and said, "Is Frank here?"

"No."

"Do you know when he'll be back?"

"Yes."

She was a little disconcerted by his short answers. Her smile slipped a little and she shifted her weight from one foot to the other. She said, "When?"

"Never."

"I'm afraid I don't understand."

Irving said, "Would you like to understand?"

Miss Frisch nodded. "Yes, I would."

"Come in."

Irving opened the door wider, and Miss Frisch stepped inside the house.

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REPORT ON COMPETITION 13

In the March issue we asked competitors to write a passage from a myopic early sf or utopian novel. Not an easy one, but as usual you came through with flying colors and a bunch of lovely off-base predictions.

FIRST PRIZE

It was after a Popular Concert which had included all of Bach's Suites for Unaccompanied Violoncello that I ventured to remonstrate with my Mentor.

"Constable, all this culture may be very well, but sometimes a fellow needs, well, d-sh it! What do ordinary people nowadays do for amusement?"

He frowned slightly. "My dear sir, it is out of consideration for you that I have exposed you only to our lighter forms of entertainment. I presume you are referring to something in the nature of a Music-Hall, or Vaudeville. I assure you that, since the advent of Universal Education, even the popular taste has become too refined to tolerate the foolishness of sentimental songs and lurid melodrama. Also, please do not use again the expression you have just uttered. I mean the one beginning with the letter D. Our twentieth-century society has grown unaccustomed to language of such violence."

—David T. J. Doughan

SECOND PRIZE

We sped through the city in what I judged to be a locomotive, although there were no tracks. "What new wonder shall I see?" I mused, for many were the sights shown me already. My guide, an illustrious professor, halted the machine.

"In this mill fine, white flour is made. All unwholesome parts of the grain are removed and certain substances poisonous to insects and rodents are introduced." I followed in as he continued: "Only women are employed here, though they don't stay long."

"Why not?" I shouted over the din, my eye caught by a certain face.

He replied, "They quickly become deaf and so have no need to speak. Indeed, few work more than a year. They are prized as wives for they never nag their husbands."

I looked at the girl, an exact double of my lost love. Beautiful and quiet. What more could a man ask!

—Janet E. Pearson

RUNNERS UP

"What is that colored fellow up to?" asked the ambassador, indicating a uniformed man leisurely polishing a chromium White House wall. "Is he a soldier?"

"No violation of the treaty," the President smiled, puffing on her pipe. "He is a member of a separate but equal battalion and does odd chores here towards his railway porter diploma."

"But Secretary of State Asuremov assured us when he addressed the League of Nations that the United

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States would be the first to abolish its army."

"Yes," she replied, "and after we convinced the LON that war was wasteful and after the treaty was passed 243 to 21, we were the first. Our forces have no weapons save shovels and radium pills to fight the true enemies of the world, natural disasters and disease."

"So it is true," the ambassador relaxed. "In my lifetime and on the 200th birthday of your nation, war is outlawed."

— David J. Daulton

As we left the magnificent, towering edifice which silently drew power from the Earth's magnetic field and transmitted it without wires to farflung farms and hamlets as well as to cities, the beautiful, white-robed girl put out a slender hand to draw my attention to the pastoral scene below. Again I was struck by the nobility of her visage with its high, domed forehead indicating a superb intelligence confirmed by her every word.

"As you can see," she caroled. "by the elimination of all predators and noxious insects we have created a veritable Eden." And indeed I was delighted to see the gentle creatures — lambs, deer, rabbits and the rest — frolicking upon the flowered greensward. How different from the world I knew before the avalanche had caught me!

The song of birds nearly drowned out her sweet tones and dulcet laughter as she lilted, "You asked, sir, how we revived you from your glacial tomb? Why, how else but by a massive infusion of Roetgen rays, which we now know to be the key to life and health!" Awestruck, I bowed my head. How wonderful to be alive in a world so filled with knowledge!

—F. M. Busby

I had been aware, of course, of the fledgling suffragette movement at the time of my experiment. But the results a mere hundred years later were astounding! Everywhere I looked women were in control. They ran the government, the businesses, the hospitals and the schools. The only men I ever saw were engaged in the basest, most menial tasks.

I asked my guide, a stunning, voluptuous blonde who held three university degrees and was an assistant to the North American Minister of Internal Affairs, what was the cause of this momentous upheaval.

She gave me an amused look. "Women are naturally superior," she told me condescendingly. "In your own time it was evident that women were more stable emotionally, lived longer and had better reflexes than men. Is it any wonder that as soon as we were freed of the necessity of child rearing that we would grasp what is rightfully ours?"

"How can you say that?" I cried astonished.

"Look for yourself," she said, waving her hand at the opulent city surrounding us. "The world is now under one government. There is no war, no poverty, no hunger. Women doctors are rapidly eliminating disease. Is this not proof of our superiority?"

I pondered over this a moment. "Are there no men at all in responsible

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positions?" I asked, somewhat fearfully.

"Oh, of course," she replied, smiling. "If they prove themselves useful and of high intelligence." She looked at me appraisingly. "You certainly need not worry," she said, caressing my hand. "Your intelligence is already proven, and," she added in a husky voice, "I expect to find you most...useful."

—Nancy J. Sitton

Touring the deck of the great airship, I tried vainly to see everything at once, but the good doctor led me relentlessly onward.

"Look!" he exclaimed, pointing out over the clouds to a great, gray sausage a half-mile to starboard, "The *Princess*! She's a monster. Besides fifty passengers and their trunks, she carries a complete wireless telegraphy apparatus!"

"Wireless?" I asked incredulously, "Will there never cease to be marvels?" and took out my pocket glass for a better look.

"We've come a long way since the first scheduled flights between Albany and Buffalo back in 1958. Now, in 1976, there are weekly flights from New York to as far as Cleveland and Chicago!"

At his next words my glass dropped to the deck at my feet, and I very nearly followed.

"Not only do the larger vessels attain to five thousand feet of altitude, but let me tell you something else. At this very moment we, you and I, are travelling at a speed of *forty-seven miles an hour!*"

—Wayne Thomas

COMPETITION 14 (*suggested by Philip Michael Cohen*)

Send us up to a dozen science-fictional "What's the Question?" jokes, e.g.:

A: The Man Who Sold the Moon.
Q: Who won the Con Man of the Year award?

A: Power to the People
Q: What is Zenna Henderson's motto?

Mr. Cohen cautions that a well-made WtQ joke should be funnier in A-Q order than Q-A order.

Rules: Send entries to Competition Editor, F&SF, Box 56, Cornwall, Conn. 06753. Entries must be received by July 10. Judges are the editors of F&SF; their decision is final. All entries become the property of F&SF; none can be returned.

Prizes: First prize, Six different hard cover science fiction books. Second prize, 20 different sf paperbacks. Runners-up will receive one-year subscriptions to F&SF. Results of Competition 14 will appear in the November issue.

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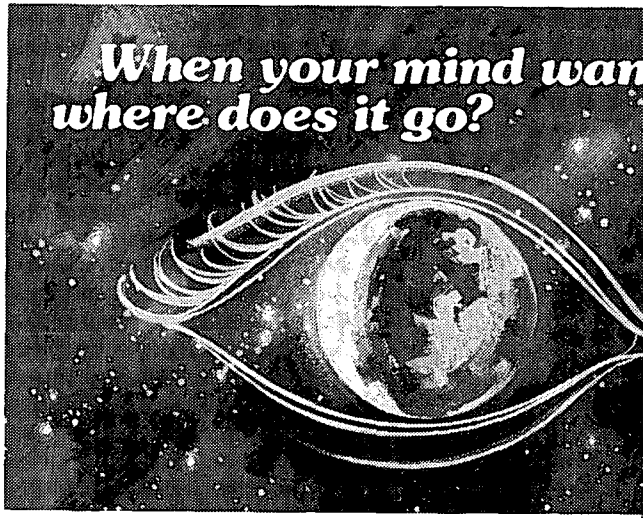

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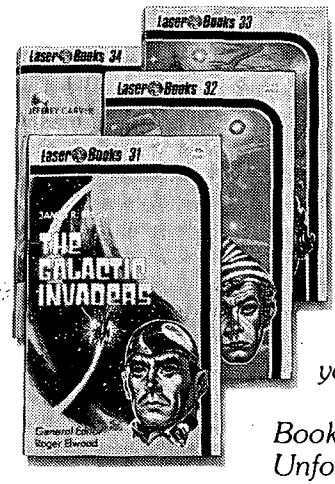

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